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Architecture as "A Combination of the Arts."

THE fifth lecture of the Professor of Architecture at the Royal Academy, which was printed in full in the *Builder* for March 9, dwelt to a great extent, partly directly and partly by implication, with the question of the extent and intimacy of the relation between architecture and "the sister arts," as it is the custom euphuistically to call them. This aspect of the subject was a peculiarly suitable one, no doubt, for treatment before an audience who were to a considerable extent more directly interested in those arts than in architecture proper, and the opinions expressed on the subject by Professor Barry were such as are likely to be accepted without much question by painters. Architects would be apt, perhaps, to be a little more critical on some of the points raised, on some of which there exists a good deal of difference, not to say confusion, of opinion, which architectural criticism, whether amateur or professional, has certainly not always tended to clear up.

We may first observe that the expressions in the lecture, as reproduced in our columns, hardly seem in themselves quite consistent. The passages we refer to are as follow:—

"We thus find that in Italy there was a greater *combination of art* than with ourselves. The whole effect was less dominated by a single idea, or set of ideas. There was consequently less unity of purely architectural design; but a greater amount of general artistic wealth. The variety of outline, and picturesqueness of structure of Northern work, was absent, and the lack of interest thus caused was supplied by the efforts of artists, working with much independence, each in his own class of work, whether frescoes, statuary, mosaics, bronze, or such-like accessories to the architecture.

A similar employment of the resources of art in all their beauty, would have been impossible in our own Mediæval buildings, the architects of which shunned plain wall surfaces, breaking them up in every way by shafts and arches, large windows, buttresses, and recesses; and we all know how incongruous is the effect even of fine modern sculpture when placed in a cathedral, such as Westminster Abbey."

Further on in the same lecture we read:—

"The early Renaissance architects followed out their principles, and decorated their buildings with everything which the taste of the period could supply, until the building itself might almost be regarded as a case to contain art, rather than a work of art itself. Purity of architectural outline and detail thus suffered, and architecture was stifled by the well-meant caresses of her sisters."

These two sentences obviously tend in the same direction, and the conclusion the reader would draw would be that architecture, as such, suffered from the too unchecked intrusion of painting and sculpture on the field, and that the Mediæval buildings were architecturally the superior, as standing more on their own interest unaided by adventitious arts. But at the close the lecturer summed up obviously in favour of Renaissance architecture, and even appeared to assume that architecture could not alone be an *art*:—

"The changes in architecture had corresponded with those in literature and the sister arts, with which, indeed, it must ever be connected. Architecture cannot in truth retain a place among the fine arts without such association. Without the traditions which cling so lovingly around each old monument of the past, without sculpture and the assistance of the art of painting, architecture must soon become a matter of science alone, a question of putting bricks or stones together, so that they may not fall."

Now, putting this and the previous sentences together, it is certainly difficult to see where architecture gets to at all. It becomes merely a receptacle for the display of sculpture and painting, or it is reduced to engineering. We have not, however, quoted the above passages with the view of representing the lecture from which they are taken as specially defective or inconsistent, but only because they serve to illustrate the existence of a little confusion of thought as to the relation of architecture to what is more generally and distinctly called "art." If, in fact, we were to put together in a comparative manner a number of definitions of architecture from eminent architects and critics, we should find ground for making architecture almost anything from sculpture to iron construction. The two extremes would perhaps be represented, among really eminent critics, by Mr. Ruskin and Mr. Fergusson. The former has spoken in the most contemptuous terms of all architecture which is not mainly sculpture; the latter, though he has illustrated existing picturesque architecture so largely, has really in theory brought modern architecture very nearly to the frank treatment of construction. He, however, gives it a place, and a tolerably high one, in his scale of the Arts. Professor Barry's last-quoted sentence goes near to deny that in its practical aspect, as building, it can be an art at all. Many other more or less conflicting criticisms by more or less competent minds will occur to all who are in the habit of reading architectural literature. There must surely be a plain and logical central point of definition, if we could only hit it.

To take the last point first, is it a fair statement of the case of our client "Architecture," that without the aid of her "sisters" she would soon become a science alone, her function only a question of "putting bricks or stones together so that they may not fall"? This is an interesting question to ourselves in particular, because it touches upon an opinion that we have often advocated, that the connexion between architecture and engineering is, or ought to be, a great deal closer than is commonly supposed; that in fact, if both classes of works were carried out with ideal perfection, there would be no definite line of demarcation in general theory and treatment, and in regard to many works no possibility of classifying them separately on any ground. We can make the broad and obvious distinction between works carried out solely for utilitarian purposes, and in which such purpose alone is the object (such as embankments and breakwaters), and between works built solely for ornamental purposes, of which there are in modern times very few.* But between these opposite extremes it would be hard to find the means of defining a bridge as exclusively either "architecture" or "engineering," provided it were designed as a bridge ought to be designed,—that is to say, with regard to decorative expression as well as stability; or, at all events with pure truthfulness of constructive design and no attempt at false decoration or concealment of structure under decorative sham. In the former case it would be as distinctly a work of architecture,—if the word means anything,—as a cathedral; and in the latter case it would have all the elements which go to make a great deal of the interest and beauty of many works that are now universally classed as architecture,—solidity, mass, and a powerful expression of constructive stability.

This kind of architectural expression comes nearest to being a mere matter of science, of "putting bricks and stones together so that they may not fall." Yet even in this reduction of architecture to construction it appears to us that there may be combined with the mere constructive problem an element of "perception" (shall we call it?) which distinctly belongs to the artistic side of building. It amounts, perhaps, to little more than this; that, without any question of ornamental art, there is a way of putting materials together so as to gain a powerful and expressive result, without going beyond the requirements of structural efficacy; and there is a way of doing it which, without impairing structural efficiency, is weak and characterless in result. We might have two bridges, say, both purely utilitarian works, and built of the same class of materials, one of which would have picturesque character, and the other look simply utilitarian; and the difference would be directly traceable to the presence of a certain æsthetic element in the one case, and its entire absence in the other. So that even if we come down to the mere putting of materials together, we are still conscious of the possibility of an artistic element finding place in the work: an element difficult to define, but the presence or absence of which is clearly perceptible.

* A striking exception is the recently completed nave of Bristol Cathedral, which we refer to in this connexion, partly to quote a rather piquant bit of criticism which we happened to hear in regard to it, from a friend (a clergyman, by the way), who, after praising the work on architectural grounds, added, "and then it is *so delightfully useless*, too, that it is quite a refreshing protest against the utilitarianism of the day."

But when we come to buildings which, though in the first instance utilitarian, constructed for shelter, are also constructed with a view to effect, surely it is hardly possible for one moment to maintain that, in such a case, sculpture and painting are necessary to remove the work from the category of mere science. Remove the comparatively small amount of sculpture and carving from the exterior of St. Paul's; would it be then reduced to a mere means of covering in a certain space, and arranging the materials with stability? On the contrary, scarcely any of what gives its external impression would be lost. Nor, again, is the interior devoid of beauty and impressiveness, because it has little colour and no good sculptured and painted decoration, though the addition of these would be a gain. But if a cathedral is an exceptional case, then come down (if it is to be considered coming down) to the designing of dwelling-houses. Are we to say that there is no real art in this independent of painted and sculptured decoration? It is certain that the mere planning of a large dwelling-house so as to be not only comfortable, but interesting and effective in its interior, involves an effort of taste and invention which must be called art rather than science; it is, at all events, totally different from anything which engineering in the ordinary sense of the word demands, and perhaps the only reason this art of picturesque planning is forgotten or spoken lightly of, is because it is a part of architecture practically so neglected in its development, in comparison with what might be done with it in the way of originality and variety. But when one comes to think even of what has been done, it is somewhat curious to find a son of Sir Charles Barry telling an audience of art-students that, apart from the help of sculpture and painting, there is really little or no art in architecture. Surely, the Professor's words have carried him farther than he intended.

The independence of architecture is still more exemplified, no doubt, when we turn to Mediæval architecture; and this Professor Barry seems, in fact, to have implied in his observation as to the difficulty of making sculpture harmonise with a Gothic building. The demands of the architectectural details are too prominent and multifarious to allow of proper subordination to sculpture. It may be said that the west front of Wells Cathedral depends mainly on the sculpture: undoubtedly it does; a word on that just now; but, at all events, the exteriors of Lincoln or Westminster, the west front of Tewkesbury, and many other examples, do not: they are simply architecture. But when we come to consider the question of the combination of sculpture and architecture with painting, there are two ways of looking at it,—two different ends to be obtained. The one is simply to make the building the opportunity for painting, or for hanging on the walls the finest and most finished art which is attainable, and placing in convenient situations the finest and best sculpture. In this case the building becomes simply a picture and statue gallery,—a place for the exhibition and protection of works of art. This results really in the effacement of the architecture, its reduction to an utterly secondary, or less than secondary, position; the position which it, in fact, occupied at the period of the Renaissance. The typical interior of the Renaissance was an apartment with plenty of wall space to paint frescoes on, with little architectural effect apart from this. No one goes to the Sistine Chapel with any pretence of looking at the architecture. Mr. Fergusson has drawn special attention to this in the introductory chapter to one part of his History of Architecture, comparing the typical Gothic interior with the typical Renaissance interior, propounding it as an open question which was best worth having, the Gothic architecture without any high-class painting, or the Renaissance non-architecture with the frescos of the great painters. Perhaps the question can hardly be answered; we should be sorry to lose either. But it seems a little doubtful whether a criticism quite hits the mark which speaks of this Renaissance art as a "combination of arts," and at the same time characterises it as "less dominated by a single idea" than is the case in other architectural periods. The latter statement we accept entirely; but it seems inconsistent with anything that could fairly be called a combination of architecture and painting. The architecture was completely quashed; the painter and sculptor had it all their own way. Now, our idea of a combination of architecture and the other arts is one in which a central and leading motive and style runs through the whole assemblage of art productions, combining the whole, as if the product of one mind. Such a combination is possible, and has indeed been an idea very much favoured by a number of modern architects, chiefly of the Mediæval school, who have characterised their favourite phase of art as essentially a combination, in which all the painting and sculpture was designed for and subordinate to its place in the architectural design. This is a perfectly practicable, perfectly logical theory of the relation of architectere and the arts; but it is one not at all resembling their relation in the Renaissance period. The question is, whether this view of their position in regard to each other is or is not the best for all, the theory likely to lead to the best results.

We have referred to Wells and its sculpture as a typical instance. The combination is entirely satisfactory there, and the sculpture could not be divorced from the architecture without both suffering. But of what nature is the sculpture? In its way much of it is very fine, very deep in feeling, occasionally even very vivid in expression (or rather in expressive pose and action); but it is also for the most part very conventional, very similar in type, representing, in fact, a conventional type rather than individual or human character.* So with the stained-glass figures which used to form so important an adjunct to the interior effect of a Mediæval cathedral; so with the peculiarly architectural mosaics of the Byzantine school; and instances might be multiplied. Many of these works, it is true, were not intentionally conventionalised, in all probability; they were executed as well as the skill of the men who did them and the nature of the materials allowed; but that does not affect the question: it only comes to this, that the men who raised the Byzantine and Gothic structures were splendid building artists, but imperfect draughtsmen, consequently their architecture necessarily got the upper hand of their painting and sculpture, and they produced buildings in which these arts played a subordinate and decorative part, and this practice of decorative art, of a style of painting and sculpture subordinated to the architecture, is what a tolerably numerous modern school of architects and critics have wished to see revived or developed,—a feeling in which not a few painters and some sculptors also seem to sympathise. Why the architects should wish for this is very obvious. To have a building decorated with designs in other arts, which, nevertheless, are never allowed to rival in interest the total architectural *ensemble*, or to entrain the eye by any detail too vividly and individually interesting to transgress the balance of the whole; to make the architectural design the key-note and predominating influence of the whole,—is to give to Architecture most important added charms, without dethroning her from her seat as mistress of the scene. And it is possible to understand why some of the painters (the sculptors are less accommodating) should give their practical adherence to this theory. There is a completeness and system in the grouping together of artistic invention and decoration in a consistent whole, which in itself seems to lend an added dignity and purpose to the arts so employed. But it should be clearly recognised that this harmonious relationship is not to be established without a sacrifice; and it is fair to confess that the sacrifice is on the side of the painter chiefly. The combination talked of can only really be obtained when the painting and sculpture are kept so far from nature, so much conventionalised, as to harmonise with their architectural setting in a broad homogeneous style preserved throughout, and in which the decorative effect in regard to line and colour in their general aspect is more considered than the special expression and finish of each separate painting. Once go beyond this, and approach the intensity and pathos of actual life, and the painting starts from its place as decoration, and claims our direct attention as the leading interest. This is the place really taken by most of the great fresco-paintings of the cinque-cento period. To talk of Raffaelle and Michelangelo having been decorative painters in the sense in which the word is generally used now is pure nonsense. They were only decorative painters in the sense that they painted direct on the walls and ceilings, and not on canvas. In reality, their paintings were the object to which the architecture was sacrificed. In the real decorative system the architectural *ensemble* is the object to which the painting is sacrificed. It may be, as we have said, an open question which is the most permanently satisfying result, the general scheme with the painting and sculpture subordinated, or the display of painting and sculpture as matters of separate and primary interest behind which the architectural interest disappears. But the choice has to be made between the two; architecture and the other arts can only reach their highest efforts separately. In combination one or other must give up something, or the desired balance and consistency cannot be realised. That is the truth of the matter, which it is well to bear in mind. The combination theory has, to our thinking, had the reverse of a good effect on much contemporary painting, drawing away painters from nature to ideal conventionalism; though it may be admitted that it has given in the eyes of many, and not unreasonably, a new and stronger interest to decorative architecture.

* We except from this the remarkable series of resurrection figures on a smaller scale, and probably by Italian artists. But these when considered in regard to their connexion with the architecture really are an illustration in favour of our argument; for they have the least bearing on the architectural effect of any of the sculptures, while on the other hand their real merits are lost when seen from below; they could only be fairly studied and appreciated on a near view, such as could be got some time ago when the scaffolding was up for the repairs.

WEST-END RESIDENTIAL CHAMBERS.

HOW SOME PEOPLE LIVE.

THE wrongs of men, the rights of women, are soothed or mitigated by surrounding associations. Of the inherent truth of this proposition there cannot exist a doubt. The malefactor who beats his wife, the female scourge who abuses her husband, have but to let Society into the secret of their wedded liabilities,—to show the happy and well-to-do citizen their "homes,"—and Society will admit, indeed has admitted, that a good deal is to be said on both sides of the question. Has not a certain Earl publicly expatiated upon the Home as the unit of civilisation? Have not we ourselves, for a score of years, urged upon legislators the necessity of facilitating the improvement of house property? Have we not thrust upon architects the modification of house arrangement? And what has been the consequence? All grades of the community are convinced that until the homes of the poorer classes are improved, it is idle to talk to them about sobriety, domesticity, Sunday observance, Bible-reading, Christianity, or any other form of systematic morality. Furthermore, an Artisans' and Labourers' Dwellings Act is now in force. Official inquiries, the labour of many years, will, before the close of this century, convince the world that Mr. Cross's Act was neither uncalled for nor premature; and another age perhaps witness the practical fulfilment of its early promise.

But will it have soothed or mitigated the home sufferings of all the poorer classes? Are not the most deserving poor those of whom nothing is heard or known? These questions have been put to us by a correspondent; we are but faithfully transcribing the appeal, the remonstrance of one who represents a large half-useful half-ornamental and generally impecunious class of tax-abated citizens. Mr. Fitzurse Plantagenet has laid before us the story of his wrongs, and the best thing we can do to summarily dismiss the matter,—for, like all agreeable men, the Plantagenets are not easily unhooked,—is to relate what he has told us as nearly as possible in his own words.

People talk and write about property in land, property in coin, property in brains, property in hands; but nothing is said about that purely personal property which possesses none of these aforesaid things. The House of Plantagenet has inherited lands in seven shires; its income is counted annually by hundreds of thousands, but though the family name is attached to the land and the coin, Mr. Fitzurse Plantagenet derives no benefit from either. He has no patrimony, yet he is obliged to pay 50*l.* for his rooms, 150*l.* to his clothiers, while he can just do with 150*l.* for pocket-money annually. His name precludes the possibility of his earning a living in the way that Providence evidently intended. His occupation is not only restricted, it is gone; or rather it has never come. He cannot dig; for, though the family estates increase every year, they are so tied up, and every twig upon them so protected, that not even 6 ft. by 2 ft. of the Plantagenet lands can ever be conveyed

to him. Even if he were not ashamed to beg, no one would give him anything, while his appearance presents a delusive exterior of enforced prosperity. An analysis of that appearance at once proves his case. Item, hands; item, brains. The former is a mere Darwinian rudiment, beautiful undoubtedly, but of no use in bread-winning; employed for generations in wooing and winning of another sort, the Plantagenet hand is a sentiment, an æsthetic delight. The latter item is still more difficult to define, because for centuries the Plantagenets have not possessed what, in the rude unmannered language of nine-tenths of the world, is called brains. Yet this man must live; and, we are not joking or romancing, he must live because he is a gentleman, because it is necessary that the breed of gentlemen should be kept up,—a breed, too, which continues to improve in this island, while it is almost extinct in some Continental countries. Remember what a cultured gentleman thought and always said about the breed to which the Plantagenets have for ages imparted lustre. Cried Thackeray in his easy way, and long before he was comparatively rich from the labour of his brains,—"Good birth, that is, handsome well-formed fathers and mothers, nice cleanly nursery-maids, good meals, good physicians, good education, few cares, pleasant easy habits of life, and luxuries not too great or enervating but only refining,—a course of these going on for a few generations are the best gentleman-makers in the world and beat Nature hollow." Undoubtedly; and how does a hard world repay men for having undergone training of this description,—training which fits them to sit as models to the uncouth, the nervous, the undeveloped majority of their fellow-creatures? See in what homes many of these splendid and yet modest productions are housed,—themselves human centres of refinement, yet surrounded and enclosed by vile, coarse, and unappreciative company.

Mr. Fitzurse Plantagenet resides in Little Gaunt-street, at a short distance from that club, once a famous chocolate-house, in which the echo of his ancestors' voices has reverberated for seven generations. The house in Little Gaunt-street is an ordinary house, some 18 orthodox feet wide in frontage; it is four stories high, exclusive of a commodious basement and two roomy attics. Our hero, if we may use so flippant an expression, occupies the third story, consisting of a front room devoted to day purposes; of a back room, in which the hours of the night are consumed; of a small apartment without a fireplace, and reserved for the diurnal luxury of corporeal ablution, for the storage of boots, and the repose of washable linen. These three rooms unfurnished—all opening upon a common narrow stair, and forming part of a once private house,—are let to him for 50*l.* per annum, rates and house-taxes included. The quarterly acquisition of these rooms confers upon the tenant a right to the use of the staircase, of a closet beneath the same, and of the street-door; to the last is attached a key, which becomes the tenant's exclusive and absolute property during his tenancy. Many persons of different sorts and conditions are interested in, live upon, and make money by, the house in question. That tiny bit of Earth upon which the house reposes—property extending from the centre of the said planet up to heaven—belongs to the Plantagenets; that is to say, to Mr. Fitzurse Plantagenet's eldest brother, who is forty-two years of age, and to the latter's son, who is twenty-one. The *original* leaseholder of the tiny bit is dead; his heir is advertised for, every three days, in the assignation column of the daily newspapers, and other heirs, if the heir be not forthcoming, live in New Zealand. The *first sub*-lessee, residing in Great Gaunt-street, is a builder and decorator, whose late father, having acquired a short interest in the tiny bit of land, and consequently of the house that stands upon it, encumbered it with the successive rights of three mortgagees. The *second* sub-lessee, possessing a still smaller interest in the same, has boldly secured it against possibility of alteration by the chains of a "settlement" clinched upon the altar of Hymen. The *third* sub-lessee, who most nearly approximates to the house-*owner*, lives over a shop on the other side of the street which is on the Gaunt Estate; and this gentleman extracts from the house*holder* a rent enabling him to discharge his responsibilities to his immediate lessor with an exemplary margin of profit to himself. The house*holder* farms a few acres in Yorkshire, and takes the annual rent of the house after his agent's commission has been properly deducted. The house-*tenant* himself uses the ground story of the building for business purposes, which consist in adjusting differences in commercial accounts, balancing books, winding-up estates, recovering debts, and lending money. The house-tenant's *tenants* make their agreements and pay their quarter's rents to this gentleman, who resides at an unnumbered mansion in the north-eastern district. The house-tenant virtually ignores the existence of his tenants except for a week before and a week after each quarter-day. During the forty-four other weeks in the year, the real occupants of the building receive formal recognition from the members of a family located in the basement. To this family the house-tenant relegates the duty of guarding the street-door, cleaning and lighting the staircase, and generally keeping an eye over the superstructure he farms.

The name of these guardians is Stubbs. The principal male is in a Government office, and there employed from ten till four o'clock in the capacity of porter. The principal female, well known as Mrs. Stubbs the French and English laundress, takes in "washing." This, at all hours of the morning, descends the area in loose and shapeless bundles; at all hours of the evening it remounts in crisp and homely parcels to be conveyed by Stubbs senior, or Stubbs junior, or even by Miss Stubbs and her sisters, to the place whence it was brought. The original Stubbses, having early acknowledged the advantages of matrimonial co-operation, are blessed with a numerous progeny, which have all first seen the light of day from a patent reflector scientifically adjusted to the window of the back kitchen in the house we are attempting to describe. The two eldest boys are in the army, the two eldest girls are in service. Gwendoline Stubbs remains at home to superintend the dusting of the staircase and Mr. Fitzurse Plantagenet's chambers; two smaller female Stubbses occupy the pantry during the night and early morning, and the area steps from noon to sunset. One younger male Stubbs, of weak intellect, seldom quits the front kitchen during the hours of either night or day. The last baby Stubbs is tended partly by him and partly by his younger sisters. All the persons we have enumerated dress and sleep in the two kitchens, the pantry, the two cupboards, and the wine-cellar, which go to compose the basement story. As we have explained, the ground-floor is engrossed with the business offices of the house-tenant. On the first floor reside a gentleman's family, consisting of husband, wife, two children, and a nursemaid. The two drawing-rooms however cannot afford them sufficient accommodation; consequently the back-room on the second floor, and the roomier of the two attics, are let with the first floor residential chambers. Another less roomy attic remains; and that was intended for the use of the original Stubbses. Circumstances however have intervened; why divide one family? Why not let the less roomy attic? So it turned out that the charwoman, employed by the Stubbses to do the ground-floor offices, came to inhabit the less roomy of the two attics. She, finding the accommodation spacious, took a lodger, an elderly decayed gentlewoman, who does a gentleman's rooms in the Club Chambers close by, and who, ever since the death of her husband forty-three years ago, has received weekly relief from a grateful parish.

The thoughtful reader,—and indubitably all our readers are thoughtful,—will at once perceive that though the several occupants of the house are, so to speak, provided with accommodation, there remains unappropriated yet one room,—the front room and its extemporised dressing division,—upon the second floor. Moreover, Miss Gwendoline Stubbs has not had an apartment specially allotted to her use. Now, the second floor front room and its dressing division, though *en suite*, cannot be called "chambers": a card in the fanlight of the street-door therefore announces during the season that "bedrooms for gentlemen" are to be obtained within. The bedrooms are never unlet; there are always two gentlemen, who pass their days at a club, willing to sleep in the bedroom and its extemporised division. But Gwendoline, who, by-the-bye, is a pretty girl, with long golden hair cut to fall over her forehead—Gwendoline, who presides over the dust-pan, the coal-scuttle, Mr. Plantagenet's rasher, the letters and parcels for the first floor, and last, not least, the young man in the ground-floor office who aids in the recovery of debts, the adjustment of accounts, and the lending of his master's money—Gwendoline! where does she sleep? We have said that the ground story is entirely devoted to business offices, and such places, it is well known, are always vacated at five, or at latest six o'clock, in the evening: Gwendoline Stubbs *sleeps* upon a movable couch *in the front office*. An early riser, she destroys all evidence of her lair before the charwoman in the roomy attic above descends to do the house-tenant's offices.

It will thus be readily seen that Mr. Fitzurse Plantagenet's set of rooms is perhaps the best division extemporised within the unfortunate house. He, besides, possesses an ingenious means of cooking the rasher to which we have alluded; this is performed by Gwendoline in Mr. Plantagenet's sitting-room while the owner of the residential chambers is engaged at his morning devotions, or his morning ablutions, in another room. Thus he is more fortunate than his fellow-lodgers. All their cooking is done in the front kitchen, where Mrs. Stubbs washes, dries, and irons,—that is, gets up the fine linen that delights her patronesses. Mr. Stubbs takes his morning and evening meal enhanced with the odour of other meals in course of preparation for the intermediary tenants of the superstructure. Furthermore, the nursemaid from the first floor is often there to see her mistress's first meal prepared and cooked by the industrious hands of Mrs. Stubbs. At times,—once a year, and, unless unforeseen accidents happen, generally in September,—Mrs. Stubbs is precluded from cooking and washing, or even superintending household matters. Then Stubbs gets leave of absence from his chief, and from a post of observation,—either at the area-gate, the street-door, or the public-house parlour opposite,—directs the charwoman, who occupies the less roomy attic, in the performance of his wife's daily duties. The annual arrival of another Stubbs puts the machinery of the cooking arrangements a little out of gear, but only for a short time. The real inconvenience occurs when all the Stubbs family,—two from the army, two from service, Miss Gwendoline and her sisters, the boy with weak intellect, and the children,—are assembled in the front kitchen. Then, from purely chivalrous motives, Stubbs invites the charwoman and the decayed gentlewoman in the less roomy attic, together with the nursemaid on the first floor, to join in the common meal. Then the windows of the superstructure have to be opened an inch at the top and an inch at the bottom; it is found agreeable also to leave the street door ajar, so that a current of air may penetrate the staircase, which is the natural and inevitable ventilating shaft that dissipates any foul or heavy atmosphere generated by the Stubbses in the front kitchen. It is only, too, after these events,—family festivities indulged in at rare intervals,—that any moral inconvenience is felt in the passage up the common staircase of the charwoman, and the decayed gentlewoman, to their co-operative residence in the less roomy attic. Nevertheless Mr. Plantagenet complains that, because he is enabled to pay only 50*l.* a year for three unfurnished rooms at the top of an old house in Little Gaunt-street, he should be subjected to the too close proximity of neighbours with whom he has nothing to do; to whom he is not known; and who pay as many shillings as he pays pounds,— or nothing at all,—beneath the self-same roof. True he, a Plantagenet, does not pay the full value of the rooms he occupies, because it is a rule at the West End to let a top set of apartments cheap, or even at a dead loss, to a man of name or noble birth. It has been proved, not a hundred miles from St. James's-street, that the young bucks from Fenchurch and Walbrook used to put their names down for years in order to obtain a bedroom in the house where Lord Mark Thistlewood, a brother of the late Earl of Bareacres, held the attic story; and he held it rent free from Sherrick, the wine-merchant, who farmed the Chambers at an enormous profit principally due to the noble decoy located under the tiles.

The gist of Mr. Fitzurse Plantagenet's appeal, at least as far as we have been able to follow it, is consequently this:—

Here is a man, born and bred in the very lap of plenty and refinement and bearing a name rooted in the soil of this country, compelled to reside at the west end of town, yet unable to pay more than 50*l.* for rent and taxes; compelled to act and dress up to the standard of gentleness which is his own, yet unable to increase the scraps of income he obtains from the con-

science of his eldest brother, the weakness of a maiden aunt, and the charity of that order to which the heads only of Houses like that of the Plantagenets belong. A part of the argument affects posterity. If it be physically good for the country that people like the Stubbses should increase and multiply their kind, surely it would be physically better for so grand a production as Fitzurse Plantagenet to rear up progeny after his kind; or, perhaps it would be morally best if the heads of great Houses produced no younger sons. Fitzurse Plantagenet must nevertheless die a bachelor, not so much because his income,—which, he very properly urges, conscience, weakness, and charity, as aforesaid, may yet increase,—will not permit him to quadruple his joys, but because at the west end of a giant metropolis there are no houses in which a gentleman of small income can cherish his own wife in comfort or even decency.

DECORATIVE TREATMENT OF MODERN SUBJECTS.

THE fact of the above-named topic having been formally brought forward for consideration in the paper and discussion of the Architectural Association (printed in our last number, page 272, *ante*), is of some interest; but it may be doubted whether the lecturer, or his critics for the most part, quite hit the mark in regard to the real basis of the question. Mr. Buckman's paper, indeed, hardly went into the matter with the seriousness or completeness which its interest deserved; it was slighter than had been anticipated, and must be pronounced entirely one-sided. That this should have been so was, perhaps, natural; the reader of the paper being a clever and, we think, rising artist, who has had the felicity to strike out in pictorial work a line of his own, and, of course, was pre-disposed in favour of that particular method of treatment. But he did not attempt, on that occasion at least, to go into the philosophy of the subject of decorative art further than to say that all such art had been in former times concerned with contemporary subjects, and was, therefore, of historic interest; and to draw the conclusion that, therefore, if we wanted to give value to our own art for future ages, we had no course but to go and do likewise.

Now we very much doubt whether even the premises are quite according to fact; that the deductions Mr. Buckman made from them are open to question seems to have been felt by one or two speakers at the meeting. But taking first the statement that all decorative art in connexion with great buildings had been historical, that is to say, a representation of contemporary life capable of being referred to as a record of the life of the period, we really must take such an assertion with a good many grains of salt. Taking the Egyptian and the Assyrian art, as exhibited, for instance, in the British Museum specimens, which Mr. Buckman specially exhorted his hearers to consider in connexion with the subject, there is no doubt we have there a great mass of purely historical art, representations of every-day life, hunting scenes, social observances, every-day culinary and other operations, portrayed in a manner which is not intentionally conventional, but is probably as near realism as the authors of these sculptured and painted decorations were able to go. But in what spirit do we now go to look at these? Is it for their artistic beauty, for their portrayal of anything which is noble, beautiful, or pathetic? Surely not; we study them for what Mr. Buckman very truly says they possess, historic interest, as giving in a rough but faithful manner the actual life and deeds of the men who executed them. Is there, then, nothing in Assyrian or Egyptian art which strikes the imagination? It would be untrue to say that even of Assyria, limited as Assyrian art-remains are in comparison with those of Egypt. But what is the figure which in Assyrian remains really strikes our imagination as imposing and wonderful in its mysterious expression of superhuman powers,—which has furnished a gifted living poet (Mr. Rosetti) with the subject of one of his most interesting and thoughtful poems? It is that design of the winged bull, which has become to the modern mind almost the poetic symbol of Assyria. And is the winged bull historical? In the case of Egypt, again, there is no lack of poetic significance and grandeur in her architecture, independent entirely of sculptured or incised decoration; but taking the decorative work of Egypt, what is the one conception which beyond anything else sums up to us the poetry and mystery of the old and half pre-historic kingdom of the Nile? Surely it is the figure of the sphinx: that is the contribution of Egypt to the poetry of art; and, again, we ask, is the sphinx "historical" or "contemporary" art? No bones, no fossil remains of any sphinx have been disinterred from any geological deposit whatsoever;—it is a pure product of the imagination. Then we come to Greece, and here the celebrated Parthenon frieze is unquestionably a piece of historical art, only separated from real fact by a slight and necessary degree of conventionalism. But what of the metopes, the battles of the Lapithæ and Centaurs, which are as completely decorative art as the frieze? They are at least not historical, they are fabulous conceptions; but they are not so important to our argument, as they are in fact inferior in excellence and artistic interest to the frieze. But this cannot be said, at all events, of the great tympanum sculptures. And again we ask, are they, the Minerva and the Theseus and Ilyssus, historic? On the contrary, they are among the most abstract and ideal creations of sculpture.

We might follow out the argument through such works as those of Indian and of European Mediæval architecture, with pretty much the same result. We should find in both undoubtedly a great deal of realistic art, but in both also a great deal of ideal and imaginative sculpture, though, of course, of far less beauty and importance than the Greek art. Still we find in Indian architecture representations of beings of superhuman interest and power, though impressed with the distorted, grotesque, often obscene characteristics of Indian mythology; and in Mediæval art the representation of superhuman and ideal beings, imperfectly executed, but exhibiting in feeling and interest much of that aspiration and moral seriousness and earnestness which characterised Mediæval faith on its best side. In all these the portions which we now turn to for real enjoyment as art, as a source of refreshment or of intellectual interest to the mind, and not as matter for mere antiquarian study, are those portions which are more or less ideal.

In saying this we are not urging that the historical portions of ancient decorative art were not looked upon with the greatest interest by the contemporary people for whose delectation they were carved or painted. Undoubtedly they were. But to apply the reasoning direct to modern times; to say that because such work was of the greatest interest to the people by and for whom it was executed, therefore, in order to give a living interest to modern decorative art we must adopt representations of the life of our own day in its most familiar aspects, is entirely to forget and ignore the immense difference between ancient and modern life; not merely in regard to the existence of painting and literary records (a point which was referred to in the discussion that followed Mr. Buckman's paper), but the difference created by the modern self-conscious character which inevitably springs out of our vastly-increased historical knowledge and communication with other countries. It is utterly impossible to set this on one side; utterly impossible that we can be in the same mental position as those comparatively childish races of earlier history, in whose eyes all the daily facts of their life were of importance, because they had no larger interests. We have larger interests: we demand more of art, and it is useless to pretend that we do not, except in regard to the least enlightened section of the people. It is true enough, no doubt, that when common people, the *profanum vulgus*, look at either pictorial or decorative art, they are chiefly or perhaps only interested in representations of objects and actions that are familiar to them. But to argue that therefore decorative art should represent only such objects or actions, is really to say that because most people are comparatively stupid and prosaic, therefore art should become stupid and prosaic. But in reality that which is of highest beauty and interest in art has always been the possession of the few only, not of the many; and it always must be so until the many reach a far higher relative pitch of education and intellect than they have ever hitherto attained.

But it may be urged that if the winged bulls, the sphinxes, and the Greek gods and heroes, are not historical representations of contemporary life, they, at least, represent something which those who made them believed in or cared for; and that, for our own art to be real, it is at least imperative that it should represent what we care for, not what others once cared for. And this is entirely and indisputably true. But the application of the sentiment is a much wider one than is commonly supposed. In the first place, its application cuts away one of the very grounds that have been urged for restricting decorative art to contemporary subjects. It is urged that ancient art is always historically interesting, because it represents contemporary subjects and manners; and, therefore, that we should make our art a representation of contemporary subjects and manners, in order that it may be interesting to posterity as history. But it is quite overlooked that ancient artists represented contemporary subjects (so far as they did so), not because such subjects would make their art interesting to posterity, but because they were interesting to *themselves*; while we are exhorted to do the same, because thus our art will interest our descendants. But that is an obvious fallacy. We do not practise art primarily for posterity, but for ourselves; and if we take to doing what we think will interest our descendants chiefly, we are defeating even that end, for historical art is only interesting so far as it represents the real *bonâ-fide* tastes and preferences of those who execute it. What we have to do is what interests ourselves, if we can find out what that is. The difficulty of giving a concise answer arises chiefly from the fact that life is so much more complex in its interests in these latter days than it ever was before, and it is next to impossible that any one way of regarding it can be named as specially and universally interesting to the present generation. That Mr. Buckman's idea of figures, taken directly from the life of the passing day, would interest a majority of persons is very likely; but it is also almost certain that the majority would not include most of the persons representing the highest intellectual culture of the day. What such persons do, as we believe, care most for in art, is that which represents an abstract and poetical ideal above the smaller interests of every-day life, with its fluctuations and bustle. It is true that those who keep this taste for the poetic phase of art are in a small minority at present, for this is a prosaic age, and those who like prosaic and matter-of-fact art are not only a majority, but a noisy and self-asserting majority, and have, moreover, prophets who encourage them in their perversion of taste. In no other light can we regard that ill-judged and absurd sneer at Flaxman which Mr. Buckman quoted from Ruskin. Flaxman, we take it, knew a great deal better what he was about, and what his art was worth, than any critic of the realistic schools could have taught him; and we can only rejoice that he was left free to follow the bent of his own noble genius, and to give us those ideal creations in which Greek beauty is combined with modern feeling in a manner hardly attained by any other English artist, and which, perhaps, are about the best typical example of the class of decorative art (for nearly all his art is suitable for decoration, if not actually designed for it) which is likely to have the most permanent interest for the highest order of minds, besides being specially suited for an application of art which necessarily excludes literal reproduction of nature and demands conventionalism; for this is an imperative condition of decorative art, which, therefore, is *ab initio* less suited for realistic than for abstract subjects.

One word more, by way of concluding with a crucial test in regard to a special example which occurs to us. Three or four years ago there stood in the Sculpture-room of the Royal Academy Exhibition a group of decorative sculpture of remarkable excellence and power, the model, namely, of Carpeaux's celebrated group of "The Dance," designed for the exterior of the Paris Opera-house. This, as those who saw it will easily remember, was a group of nude figures dancing in a circle round a figure with wild and excited action, striking cymbals, or some analogous instrument, with upraised hands. The whole thing was full of fire and genius, and made everything else in that year's exhibition seem tame. Now, according to Mr. Buckman's principle, this was utterly false, and what Carpeaux ought to have done would have been to represent a troupe of ballet-girls in short skirts and awkward attitudes, as the representation of the actual contemporary operatic dance. We venture to ask the realistic school,—to ask Mr. Buckman himself, whose paper gave rise to these remarks,—whether he will for one moment contend that by such a treatment the work of

the great French sculptor would have been rendered of more interest as art, either to ourselves or to any future generation?

TRADE UNIONS OR TRADE DISUNION.

THE precise rules and maxims of administration of trade unions seem, curiously enough, matters of much uncertainty,—uncertainty as to their terms, or, as in the matter of single-handed bricklaying, uncertainty or dispute as to their motives. We do not, however, require to know either in a purely speculative inquiry. We need only consider what they might be likely to be on given assumptions, and what then would be their characteristics, and speculation can only deal with examples at once simple and extreme. The leading and all-pervading principle may be assumed to be what has been acknowledged as the very fair one to raise the rate of wages relatively to work done, estimated in quality and quantity,—to raise the price of labour. The obvious and logical process of effecting this must be, as we know, by regulating the ratio of supply and demand which regulates price,—that is to say, by reducing the proportion of labour relatively to the work to be done. In the first place, it must be an object to restrict the number of workmen. In this direction something seems likely to be done by enforcing limits to the number of apprentices taken, and then by excluding from work all men who are not privileged by belonging to the union, and bound to conform to its rules. More may then be done to the same effect by limiting the amount of work which shall be done by the men who have the privileges of the union. This may be effected by rules as to the amount which each individual man shall earn, by continued protection of the slow or the idle, by exclusion of overtime, and of piecework, which would enable work done to be accurately gauged and assessed. Again, that a maximum number of men shall be employed to perform a minimum of work will be furthered by discouraging, and even fining, extra efficiency, and by reducing the hours of labour. If regulations can be generally enforced which will bring all these concentrated influences into flourishing and progressive action, it seems, perhaps, that it must be easy for the workmen to exact for their indispensable services almost whatever terms they please. The power depends chiefly upon very comprehensive enrolment and absolute discipline of the enrolled. Persuasion may be worked very effectively to bring this about; the law intervenes more or less stringently to limit the employment of persecution and terror. Certain inconveniences, however, and certain difficulties are obvious. It is clear that the scheme will not work to the contriver's entire satisfaction unless competition can be effectually excluded; yet, non-society men will take work at prices that suit them, though not the men of the union. And the worst of it is that the men who choose to be independent will not be the worst men, whereas the union is certain to have its full share of the incompetent and the skulkers. It is well if this opposition has not some ill fruits; does not lead to hard words and disputes, to expulsions and fines of recalcitrant members that may savour of arbitrary confiscation; in very unfavourable circumstances, even personal violence, damage to tools and property, and a system of terror even culminating in assassinations might ensue. Consequences such as these will be deprecated on all hands, but theory cannot neglect an obviously-possible development. Such is the force of *esprit de corps*,—of corporate spirit,—that it is not unnecessary to record a warning how men of genuine character may be led away by it to palliate, not to say to perpetrate, cruel injustice, and find themselves involved in crime.

So much for theoretical deduction; but as a mischief that would be more frequent under the supposed organisation, one class of workmen would be arbitrarily preventing others from raising themselves or their children from the condition of unskilled to skilled labourers, and bettering a somewhat hard condition of life. This, it will be allowed, has a look of tyrannous unfairness, and unfairness is a *casus belli* in which we know which side will one day get the worst. Again, even within the ranks of the privileged there would be men of energy, of talent for the finer work, of praiseworthy ambition and capacity of labour, who must needs be severe sufferers by the limitation set upon their right to earn as much as they were equal to earning. The solace of the hardest lot is the hope of improvement, and every lot becomes hard to men with other than the feelings of the slave, which shuts out even the possibility of such a hope. What happiness can be found in labour,—labour which should be the very substantial basis of happiness, which is paid equally, whether much or little, good or bad? It would seem that if such a system were really established it would constitute a tyranny of the idle and incompetent over their betters, and could only subsist by its pernicious influence gradually sapping the self-respect of these better natures, and reducing their native dignity to most uncongenial degradation.

If we pursue the consequences of this system, to again, perhaps, imaginary, but still to quite a possible extreme, we should find the cost of the results of such labour so much enhanced that the expenditure of the public, the grand consumers, who are the ultimate employers, would be diverted to other channels, and restricted in those which are so artificially controlled to the barest necessities. Or the supply of the public would be derived from abroad, and what was once manufactured at home would be imported. As regards the community in general, such a stimulus to foreign commerce is perhaps as little to be deprecated as the stimulus to economy and invention of labour-saving machines, but the unionists would not take this point of view. Then, in some cases, would ensue alarm of the home manufacturer, or contractor,—it may be an attempt to help themselves by introducing foreign labour,—or otherwise a stand would be resolved on, and a desperate trial of strength ensue between strike and lock-out,—that is, war. Fortunately, we have nothing to do with pronouncing on the rights or the wrongs of any particular dispute between capital and labour; we are restricting ourselves within the limits of general considerations of speculative theory. On this ground we have little hesitation in concluding that disputes which shall be prolonged with great obstinacy ought, in nineteen cases out of twenty, never to have broken out at all; in such instances there must have been evidence of facts, available at the first sufficient to induce one of the disputants to give way, or both to consent to a compromise, and the subject in dispute need only have been regarded and discussed dispassionately for it to have been decided at once upon the merits. The interests of both parties are so seriously bound up with the maintenance of co-operation, and a good understanding, that nothing but passion or gross misconception can be accountable for keeping them long apart, at the cost of infinite damage to both. Passion and misconception there may be on either side, and assuredly there are not wanting tendencies to over-weening pretensions on the part of capital from personal predispositions, but the party of labour is bound especially to stand upon its guard against being misled. It is the side of the large numbers, and large numbers are apt to give way to rash panics, and to be carried off by generous but false enthusiasm of loyalty to ill-selected leaders and advisers. The larger numbers are the less instructed and exposed to be acted upon to their hurt, not merely by dishonest and self-interested leaders, but by leaders of perfect good faith, whose discretion, however, is by no means on a par with their right-mindedness.

But how else than by union is labour to protect itself against capital? How else can the many grapple with the concentrated power of the few but by concentrating also, and putting themselves frankly and loyally under the guidance of those whom, to the best of their judgment, they adopt as the best informed and most loyal leaders?

Well, if our opinion,—we will not say advice,—is frankly asked, we frankly give it. Unite by all means, and by all means on fitting occasions which are quite conceivable, and which we are open to admit have occurred more than once ere now; unite to strike, unite and strike, after fair trial of the offered alternative of a certainly reasonable demand or a strike; but let labour put itself in the right with labour first; let it have faith in the principle of free trade in labour rather than in the imbecilities which ought to be obsolete of illiberal artificial protection. Let jealousy among fellows be banished for the mean thing that it is, and the maxim be adopted that made England merry England of yore, though it was in days when hard knocks were the current medium of exchange and the leading concern of industry,—"a fair field and no favour, and let the best man win." As regards the relation of labour to capital we have this to say: the terms ought to cease, and might cease, to imply an antagonism, if the artisan class did justice to itself and its opportunities. There ought to be no labourer who should not be himself more or less of a capitalist,—the possessor of savings, invested as savings now may be with absolute security,—and who, by virtue of such savings, should not be able to avail himself of those aids to economy by co-operative associations which, in various localities, have had admirable economical results. Glad, indeed, should we be, if the majority of the labouring (the artisan) classes possessed that happy guarantee of an established home,—a dwelling that is the occupant's own property. But, apart from this, the true basis of independence is to be sought in a sufficient fund for insurance against age and accidents and the casualties of employment; a fund not exposed to the contingencies of an entirely different purpose, and not liable to be squandered by an ill-considered strike, entered into at the suggestion of others, encouraged by false appeals to fellowship, and still falser to supposed hostility, and persisted in long after common sense has decided that more was being lost by it than even success the most favourable could ever replace. So it is that, analyse what social question we please, from the embroilments of nations to those of classes large or small, the best solution is dependent at last on knowledge partly, but, above all, on common sense conjoined with common honesty.

ROUND AND ABOUT THE BAR.

AFTER an existence of just over a couple of centuries, with terrible threats hanging over it for more than half that period, the Temple Bar of the second Charles's reign, 1669-1673, was finally demolished in the month of January, 1878. Few buildings had been associated with a greater variety of exciting incidents than this one during the time of its standing at the boundary of the cities of London and Westminster, and yet it is only in recent years, thanks to Mr. T. C. Noble's researches, that its real history has been told to the world.

We do not intend in this article to go into details about this City gateway. A reference to our earlier volumes will give ample information of its history and antiquity;* but it may be interesting to our readers to note a few facts not only illustrative of the building, but also of the celebrated houses which so long surrounded it, but which in their time have also been forced to give way to the march of nineteenth-century improvements.

The highway from London to Westminster was anything but a pleasant road to travel in "the good old times." It was truly countryfied and unpaved even as late as the sixteenth century, and still later the game of football was a favourite play in the open Strand, while in Fleet-street the monotony of seeing only occasional brisk road-traffic was enlivened by the 'prentice cry of "What dy'e lack?" from the tradesmen's shop-doors, and their rough-and-ready salute of a country cousin; for, according to a contemporary account of his visit to London,—

> "The Haberdashers that sell hatts,
> Hit Robin Conscience many pats,
> And like a company of cats,"

scratched and worried him sorely.

The ancient aspect of the Strand may be gleamed from the fact that it is described in an official document as "full of pits and sloughs, very perilous and noisome," and yet in the reign of Edward III., amid the discomfiture of (we must suppose) an overflowing Thames, and a deep, muddy, and dangerous road in winter, there lived within a few paces of old Temple Bar, the Bishop of Bangor, in Shoe-lane, and the Bishops of Exeter, Bath, Chester, Lichfield, Llandaff, and Durham in the Strand, while two palaces,—Bridewell and the Savoy, not forgetting the Monastery of the Whitefriars, and the Sanctuary of the Templars,—add to the list of the Inns or residences of that day, which had pleasant gardens sloping to the river banks.

It was in 1634 that Captain Baily obtained permission to set up the first hackney-coach stand in London; and the spot selected was close to the scene of many a rural festive gathering,—the maypole in the Strand,—which stood nearly opposite Somerset House, on part of the site of the present St. Mary's Church. Poor

* See the *Builder* for March 12, 1870; Dec. 16, 1876; &

John Taylor, the water-poet, speaks of their introduction in this strain:—"After a mask or a play at the Court, even the very earth quakes and trembles, the casements shatter, tatter, and clatter, and such a confused noise is made, so that a man can neither sleep, speak, hear, write, or eat his dinner or supper quiet for them"! As a sample of our poet's complaints at that time, here is a copy of one preserved among the State papers:—

"To the Right Honble the Lord Cottington,
The Humble Petition of His Majesty's wa'ermen
Shewes that your Lordshipp is so well inclin'd
To pay us, that our order you have signed:
For wch we humbly thank you; tho' as yett
We sue and seeke, and can no payment gett,
We live in debt: we coyne and creditt lacke,
And we do feare Sr Robert Pye is s'ack,
Or els unwilling; therefore we implore
Yor lordshipp to remember him once more,
And we shall pray unto the power supernall
To bless yor Lordshipp temporall and eternall.
JOHN TAYLOR."

As for Temple Bar itself, the earliest notice of it is dated 1301, but at that period it was nothing more than a bar or chain across the street. John Norden goes so far as to say that it was a gateway at the time of Wat Tyler's insurrection in 1381, but the first notice of it as a building is 1533, when, on May 31, "sweet Anne Bullen," passing along to her coronation, was gratified by seeing the conduit in Fleet-street (surmounted by angels, who with music made "a heavenly noyse") running claret and red wine, while Temple Bar was "newly paynted and repayred, where stood also divers singing men and children." Next "a good and substancyal newe payre of gates" was put up when Philip of Spain passed through the Bar in 1554, and the key was given into the custody of a tenant or keeper, who shut and opened them night and morning. The necessity of locking up the City at night in Queen Elizabeth's reign is shown by an entry in the books of St. Dunstan's parish in 1576: "We pr'sent Crowne Co' in Chancery Lane for want of a gate by means whereof roges and idle persones have recourse out of the *ffeilde* in the night season through the said court in the high streete." Now, a reference to Aggas's map of London in 1560 will show that at that time Drury-lane was a bye country-road leading from St. Clement's to "Broad St. Giles." Chancery-lane had only a few houses at its Fleet-street end, while Temple Bar is a covered building, with a lane running from it northwards, called Shire-lane, which, in the reign of James I., was re-christened for a time *Rogue's-lane*. There were then *fields* close to the Bar, about which we shall have something to say presently; but the gates entering from the open country both into Shire-lane and Chancery-lane were often "presented" even to the middle of the same king's reign, "by reason that rogues and badd people in the nyght tyme" made it their business to pay prohibited visits through them, "whereby great harme and annoyance groweth to the neighbourhood."

In 1636, Inigo Jones was consulted about designing a new Temple Bar, but the design, which to our mind would have been a great ornament to the City, was never carried out. The Bar was evidently in a very shaky condition, and, like the Bar of our own time, lived long a threatened existence. The structure is shown in Hollar's seven-sheet Map of London; it is a plain erection, probably of wood, with slanting roof, gabled; there were three openings for traffic, and between these two columns with pedestals. Carvings of the Royal Arms were over the carriage-way, and those of the City over the footways, while a little foliage upon the pediment completes the description. And this building remained until 1670. An account preserved at Guildhall, and quoted by Mr. Noble, shows that between August, 1669, and March, 1673, there was paid by the City towards the erection of a new gate, a total sum of 1,397*l.* 10s. Of this amount, the four effigies (James I. and his queen, Anne of Denmark, often wrongly described as Queen Elizabeth, on the City side, and Charles I. and II. on the Strand side) were sculptured by John Bushnell for 480*l.* The architect of the modern Temple Bar was the rebuilder of London after the Great Fire,—Sir Christopher Wren,—and the masons were Joshua Marshall and Thomas Knight. Marshall's Temple Bar has vanished, but there still remains a bit of his work,—the pedestal of the finest equestrian statue in London, that of Charles I. at Charing Cross.

The new City gate had not been in existence many years before its summit was made "the modern traitors' gate,"—to be "adorned" with the heads of those executed for high treason,—the last heads so honoured being those of Townley and Fletcher, who suffered for the 1745 rebellion. One of these fell down in March, 1772. How long the solitary tenant of the Bar's summit remained, history tells not,—a high wind must have carried it off its pinnacle years later, and ended for ever the most ghastly exhibition in London.

But while all this was going on, great outcry was made that Temple Bar was in the way, and in 1753, to pacify the agitators, the City ordered that the gates of this Bar, together with Newgate and Ludgate should be thrown open at night on and after the 1st of November. Still the cry continued, and in 1759, the Corporation actually gave the then tenants of the Bar notice to quit. Then came Alderman Pickett's proposals, and to him certainly the City was subsequently indebted for improvements, long before the New Law Courts were thought of; and yet, curiously enough, his new buildings here had to give place to this Palace of Justice, while his other buildings at Snow-hill had to give place at the same time to the Holborn-valley Viaduct. And now, Temple Bar, for the removal of which he made so many attempts eighty years ago, has at last been "improved off the face of the earth." Such then, in brief, are a few facts relating to the structure itself; all the remarkable events connected with it are far too numerous to be here detailed. But its neighbours,—the buildings which have for so many years surrounded it,—are of such an interesting character, that a note or two derived from original sources will probably prove acceptable to our readers.

The first house to be noticed is Child's Bank, which for nearly two centuries has been so closely connected with the Bar, that no account of the history of one would be complete without that of the other. This house is known as No. 1, Fleet-street, but a portion of the premises adjoined the Bar on the Strand side. Every one will recollect Dickens's description of its interior, but historically its rise and progress has lately formed a most interesting "Account of ye Marygold" (the ancient sign of the bank) by Mr. F. G. Hilton Price, and from which we learn many new and curious facts. When the ancestors of the house of Child & Co. first commenced business in this neighbourhood has never yet been satisfactorily established, although a William Wheeler, goldsmith, is generally supposed to have been the founder in the early days of Charles I. He was succeeded by Robert Blanchard, who in turn was succeeded by their apprentice, Francis Child, subsequently alderman of the ward, Lord Mayor of London, and President of Christ's Hospital. To this Francis Child and his partner, John Rogers, "ye executors of Madam Gwin"—the celebrated Nell Gwyn—signed an agreement in 1687 acknowledging that she had died in the debt of the bank 6,900*l.*, but that the Duke of St. Albans had paid 2,300*l.* off, and the sale of her plate had realised 3,791*l.* 5s. 9d. At that date the banking-house of Childs was one of the few of stability in the City, and its customers included Charles II., Prince Rupert, James, Duke of York, William and Mary, Prince George of Denmark, Samuel Pepys, Lord Chancellor Clarendon, Sir Peter Lely's executors, the Poet Dryden, Horace Walpole, Lord Keeper North, several dukes and members of the nobility, Mr. Speaker Onslow, &c. It would appear the "Marygold" was the sign of a tavern established "time out of mind" in St. Dunstan's parish, and the earliest notice of it found by Mr. Noble was in 1619, when Richard Compton, the landlord, was "presented" for disturbing his neighbours at night by keeping a disorderly house. As a tavern it ceased to exist before 1676, but the bank kept up the original sign, and it still hangs inside the front shop, and is represented in watermark on their present cheques. Now, it is a curious fact that the Marygold was a popular sign hereabouts, for in 1673 Mrs. Cox, a milliner, "over against St. Clement's Church," did business at a similar sign, while we have seen in a deed dated 1700, the sale by Henry Cole, wine-cooper, to Edward Hammond, vintner, a house described as being "in or near Fleet-street, in the parish of St. Dunstan's-in-the-West, London, *heretofore* called or knowne by the name or signe of the Marygold, and *lately* called or knowne by the name or sign of the Green Dragon, and *now* called or knowne by the name or sign of the Vine." On the earliest printed cheques of the bank,—we have seen one dated 1729,—is engraved a view of Temple Bar. These cheques are in the nature of promissory notes. Before then all orders to pay were written on small slips of paper of no regular size. We have seen one dated 1707 "To Sr Ffrancis Child, at Temple Barre, London," from "your humble servant and brother, John Child." Younger banking-houses than Childs, and yet each having no mean history, still flourish in Fleet-street,—all springing from the goldsmiths of old London, who were so cruelly robbed when Charles II. shut up the Exchequer. One of the most interesting documents in our possession is an assignment by Thomas Vyner, executor of Sir Robert Vyner, bart. (one of those robbed by the "Merry Monarch"), of a grant derived under the patent granted by the king in April, 1677 (in settlement of certain loans) of an annuity of 25,003*l.* 9s. 4d. out of the Excise "for ever."

The next noted house to Child's Bank,—but the site of which now forms part of their premises and the late Child's-place,—was the world-renowned Devil Tavern, immortalised by Ben Jonson. The tavern ceased to exist in 1787. In its earlier days, the wits and poets of the day resorted thither. The beautiful Duchess of Richmond's jewels were sold here in 1703; and here forty years later the Royal Society held its dinners; and Swift, Garth, Addison, and Steele met here, it being "a place sacred to mirth, tempered with discretion." A few doors from the "Devil" was another celebrated coffee-house known as "Dick's." It was established before 1681, and still exists at No. 8. The "Rainbow," No. 15, was the second coffee-house opened in London. Its proprietor in 1657, James Farr, a barber, was presented by the parish "for makinge and selling of a drinke called coffee, whereby in making the same he annoyeth his neighbours by evil smells," and setting his chimney on fire at night. At this house, about 1682, Dr. Nicholas Barbon, son of "Praise God Barebones"—as he has been called—established the Phœnix Fire Office. Almost opposite is the "Cock" Tavern, the head waiter of which has had his praises sung by the poet Tennyson. We have seen a letter addressed to "Mr. Latymer at his lodgings nere St. Dunstan's Church, at the signe of the Cock," 1600, but do not know whether this was the present tavern's predecessor. The landlord, in 1655, issued a token, and shut up his house and went into the country during the time of the Great Plague. Here in April, 1668, Pepys, the diarist, "ate a lobster and sang mightily merry" with his two lady friends, Mrs. Pierce and Mrs. Knipp,—a custom some of to-day would call the height of impropriety.

A few doors eastward of the "Cock" stood "once upon a time," another tavern called the "King's Head." It was "an elegant mansion" in the reign of Edward VI., and in 1585 its owner was indicted "for pouring bad water upon the people's heads below." Now the water must have been "bad" indeed, for at that time it was the ordinary way in wet weather for spouts thus to carry the water off the roofs, and deluge the passers by. In the seventeenth century taverns were not restricted to ground-floors: hence the fact of Richard Marriot, subsequently Isaak Walton's publisher, keeping a shop in 1665 under the "King's Head." Here in 1678—exactly two hundred years ago—met the Popish Plot conspirators, headed by Lord Howard; the house was pulled down to widen Chancery-lane in 1799.

On the 5th of July, 1493, "at the Temple Barre of London," or rather in a house close to it, Richard Pynson "fynisshed" his "Dives and Pauper," the first book in London printed with a date away from Westminster. It was he who introduced the Roman letter into printing. In 1525, he and another printer, Robert Redman, got into "paper warfare," Pynson telling him, "even as the devil made a cobbler a mariner, he made him a printer"! Where Butterworth's law-publishing house stands,—No. 7, Fleet-street,—stood a house having the sign of the "Hand and Star," and where Richard Tottil kept his establishment as law-printer, by patent, to Edward VI., Mary, and Elizabeth. The house has thus been associated with the trade for more than 300 years. In fact, Fleet-street has been the great centre of the art of printing from the days of Caxton to the present time, for Pynson was one of his apprentices. Within shade of the first Temple Bar, the art flourished, and within a few hundred yards around the last Temple Bar the art has been the most powerful means of proving that world-renowned proverb, "knowledge is power." May the art long flourish!

At No. 17, Fleet-street, next door to the "Rainbow," and facing Chancery-lane, is a building stated on its front to have been formerly the palace of Henry VIII. and Cardinal Wolsey. This is an error. It was erected in 1611, probably by Inigo Jones. The upper portion of the house is very roomy, the staircase wide, and the first floor has an elaborately gilt ceiling, with armorial bearings and Prince of Wales's feathers in the centre, and monogram "H. R." These decorations are accounted for from the fact that the mansion was formerly the palace of Henry, Prince of Wales, son of James I. Mr. Noble tells us of documents he has seen among the State papers, dated 1618, "from His Highness's council chamber in Fleet-street," and in 1635, called, "a house in Fleet-street where the King's commissioners for his revenue when he was Prince of Wales usually met." Fortunately, the present tenant is a great lover of antiquities, and has preserved the building as far as he has been able to do so, considering that at the beginning of the present century the house was occupied by the celebrated waxwork exhibition, founded by Mrs. Salmon, in the reign of Queen Anne. But this was not the only exhibition within view of Temple Bar. From 1736 to 1798, Rackstraw's museum of anatomy flourished at 197, Fleet-street, and the giants at St. Dunstan's Church (similar to those in Cheapside) struck the bells and told the hour, and caused many a country bumpkin to lose his savings, and the London citizen his patience, while trying to elbow his way through the crowd. In Fleet-street, among "the sights" of the last century were—a great Lincolnshire ox, nineteen hands high, and four yards long; a child fourteen years old without thighs or legs, and 18 in. high; a Turkey horse, 2 ft. odd high, in a box; an Italian giantess, 7 ft. high, weighing 425 lb.; a mermaid (a similar exhibition stopped by the Lord Chamberlain in 1822); and last, but not least, here De Hightretight, the fire-eater, ate burning coals, swallowed flaming brimstone, and sucked a red-hot poker five times a day.

Temple Bar took its name from the adjacent home of the Knights Templars,—one of, if not the most, powerful of the ancient knightly bodies in Christendom, who fell at the end of the thirteenth century through wielding their power unlawfully. Their dress was a long mantle, on which was exhibited a cross, still kept in memory by the armorial bearings of the Middle Temple. The sister society,—the Inner Temple,—changed their arms in the reign of Elizabeth, from the Holy Lamb to Pegasus, or the Winged Horse. Anciently the Templars had their settlement on the site of Southampton-buildings, Holborn, but removed to their new estate—the present Temple,—in the twelfth century, and here they remained until suppressed in 1310, the last prior dying in the tower, and the sheriffs completed their dissolution by taking possession of the property, including the present Temple Church, which was consecrated in 1185, and which is the largest of only four "round" churches in England. By Royal grant, the estate passed through the hands of the Earls of Pembroke and Lancaster, until in 1324 the king granted it to the Hospitallers, or Knights of St. John of Jerusalem, the gateway of whose more modern priory,—St. John's Gate at Clerkenwell,—still exists. St. John's Gate has been repeatedly stated by modern writers to be one of the ancient City gates; whereas, when this priory was in existence, it was "far away *across the fields*" out of the City, and *in the suburbs*. Temple Bar was therefore in reality the *last* of the City gates, or rather not the City gate proper, because the walls of the City terminated at Ludgate-hill, and Ludgate was pulled down about 1761, but any one may still see a portion of the old wall in the court facing the Old Bailey. When the Corporation obtained possession of the "liberty" between Ludgate and Temple Bar is unknown, but it is supposed to date back to the Conqueror's time. Any way, in 1222, the decree which terminated the ecclesiastical dispute between the Abbey of Westminster and see of London marks the boundary further westward in the Strand, and it was not until the reign of the Stuarts that the present jurisdiction was properly settled. The City, however, very early erected their barrier by the Temple, and so from time "beyond memory" this barrier, or bar, and subsequently a building and gate, was put up here.

Before the year 1440 the Temple became the home of students "learned in the law," for Wat Tyler and his rebels had sadly damaged it in 1381. When the *two* societies sprang into existence is unknown, but each paid 10*l.* to the prior of St. John's at the dissolution of that monastery in the reign of Henry VIII. In February, 1547, the Inner Temple ordered their chief butler to enter in a book the names and addresses of all members joining the society, and from that time to the present this has been done. It was James I. who granted the Temple *to the two societies jointly* by his deed dated 13th August, 1608, and yet made *each* society pay 10*l.* per annum. He reserved the right of appointing the master, and the Crown still retains it, although the freehold has long since become the sole property of the societies. As we have shown, the gateway opposite Chancery-lane was erected in 1611; and that nearer the bar called the Middle Temple gate, in 1684, by Wren (architect of the Bar) upon the site of an older building, erected by Sir Amias Paulet, as a fine imposed on him by Wolsey. By both entrances the Shaksperian rendezvous, the far-famed Temple gardens, can be reached.

It is impossible to say anything in this article about the celebrated persons associated with the Temple, yet we are prompted to note a fact which we have recently found about a very unworthy and yet historical character,—William Parry, who in March, 1585, was executed before the Parliament at Westminster for high treason, and after whose death special prayers were issued for a happy deliverance, &c. We find that this man resided in Fetter-lane, close to Temple Bar; was descended from a very poor stock, but that his father, after having sixteen children by one wife, and fourteen by another, died at the age of 108! William appears to have made friends with Lord Burleigh, and subsequently was actually pardoned by that statesman for having broken into the chambers of Hugh Hare, in the Temple, and attempting to rob that individual, and this, too, at a period when such a crime was death. After a series of the most impudent frauds this Parry got mixed up with the Scottish succession agitators, and as a result soon came to the gallows. We have seen the confession, in his own handwriting, which he addressed to the Queen from his prison in the Tower. Here is an extract from the extraordinary document:—

"The indignityes passed between yor Ma and the King Catholick are many. You have disquieted his state, mayntained his rebels, and do bere with such as have robbed hym and his subjects. Many marchants are undone; some few are enriched; some bad hunors pleasd, and yrself dishonored. Yt may cost you dere; look to yt in tyme. There is possybality to repayr all. The Qn of Scotland is yr prisonr; let her be honorably intreated, but yet surely garded. She may do you good; she will do you no harme if the faulte be not English. . . . Remember yr unfortunate Parry, chiefly overthrown by yr hard hand. Amen yt in the rest of yr servants, for it is past wth me."

Let us now take a turn outside Temple Bar, if only to note a few facts only just come to our notice. They may interest many who have already dived into Mr. Diprose's interesting rambles in St. Clement's Danes. Where the New Law Courts stand, stood, in the good old times, such a nest of courts and alleys as were only to be met with in such a place as unreformed London. "Next door" to Temple Bar, on the north side, stood the well-known fish-shop to which Crockford, the gambler, succeeded, and whence he migrated to St. James's to play hazard, and build his club-house, at a cost of 94,000*l.* He there took his stand against everybody, and for years none could break him, although they tried as much as they liked. He became a millionaire, and retired in 1840. His celebrated club then died out, but the house still stands, although modernised, at the north end of St. James's-street. Facing the New Law Courts existed a tavern, called the "Rose." It was a noted "house of call" for politicians, and a century ago the site, and the adjoining Thanet-place, was sold by the Earl of that name to John Cooke, a bookseller, in Paternoster-row. But a few doors west is Palsgrave-place. Here formerly stood the notorious Palsgrave Head Tavern, and next door, at Heycock's ordinary, Andrew Marvell dined, and here he castigated the M.P.s who were in the pay of the Crown. Talking of those early times reminds us of the poet Sir John Denham, and his student chums, who in 1635, after a drunken frolic at the Griffin tavern, in Shire-lane, took a pot of ink and a plasterer's brush and blotted out all the signs between Temple Bar and Charing-cross! At No. 217, Strand (the London and Westminster Bank), was the banking-house of Snow, celebrated by Gay, and subsequently Strahan, Paul, & Bates. Then come Essex-street and Arundel-street, both occupying the site of those noble mansions, Essex and Arundel Houses. In the former was stored the famous Cottonian Library, 1712-30, and in the latter lived the Earl Arundel, who "brought out" Hollar, the engraver, and "old" Thomas Parr, the latter dying here, aged (so tradition states) 152 years odd months, simply because the Earl's house was more sumptuous to dine at than a Shropshire cottage.

St. Clement's Church, which stands now by itself, but which, in the last century, formed one end of an angle of houses known as "The Island," one side of which was called Butcher-row, from the numbers of that trade keeping shop there, is too well known to be described. We have, however, a very curious folio sheet before us, entitled "The Vestry: a Poem," 1701. It is descriptive of the "doings" of the parish at that date, and makes the parson say,—

"Next consider the hazards and dangers we all
Are continually in, lest the steeple should fall;
And judgment is given by those that are skill'd,
That it won't cost so much to *support* as to *build*.
I hope you won't follow the practice of many,—
Be fools by the pound to be wise by the penny."

Eighteen years after this was printed, Gibbs added the present tower and steeple to the old church.

Within view of old Temple Bar anciently existed "the fields," then truly fields and open country. We happen to have (by documents and original deeds) a complete history of the site hereabouts from 1638, which was years before Henry Serle or Nicholas Carey became possessors of the soil. Where the present New Square stands was originally a portion of Fickett's Field, and the houses were erected by Serle in 1697. A copy of a printed broadside (of the reign of Charles I.), in the shape of a petition, says,—"Whereas your petitioners, with other inhabitants, hath to their great comfort, health, and benefit, time out of mind enjoyed free liberty to walke, recreate, and disporte themselves with all kinds of lawful exercises, as likewise to train, muster, and dry cloathes in three *waste* common fields, called by the names of Purse Field, Fickett's Field, and Cup Field, adjoining to the west side of the Hon. Soc. of Lincoln's Inn, yet one William Newton, gent., for his own private lucre, contrary to statutes, proclamations, &c., hath by himself and his assigns, within five or six years last past, erected very many buildings on new foundations (inhabited for the most part by Popish recusants), and caused many thousand loads of dung and dirt to be laid in the said fields, now used as a common laystall, and made a common horse-pool therein," whereby the petitioners were prevented from walking, training, and drying their clothes. Some score years previously to this the benchers of Lincoln's-inn also petitioned to prevent Sir Charles Cornwallis erecting a mansion in the fields. In 1696, however, fifty-five of the houses then erected on the estate were sold for 27,000*l.* Of these, nine houses fronted Serle-street. We fancy the freeholds of these fifty-five houses would fetch a trifle more than this sum at the present time. Until the reign of the Stuarts, all the ground outside Lincoln's-inn was truly open country, and upon the wall of the Society's garden in Chancery-lane, otherwise Chancellor's-lane, worked none other than "Mr. Benjamin Jonson, bricklayer" and poet,—he, who, according to Fuller, combined two professions, "having a trowel in his hand and a book in his pocket!"

And yet, talking on the combination of professions, who could be a more celebrated neighbour of Temple Bar than the remarkable "Praise-God Barebone," who was a leather-seller near Fetter-lane, in Fleet-street, and the hero of Cromwell's Parliament. Many a time must he have passed under the Bar on his way to "the House" to meet the hundred and odd other members who composed the "Barebones Parliament." We have seen Cromwell's original summons to him, and as it is an historical document of more than ordinary value, a copy is here given:—

"Ffor as much as upon the dissolution of the late Parliament it became necessary that the peace, safety, and good government of this Commonwealth should be provided for; and in order thereunto, divers persons fearing God and of approved fidelity and honesty, and by myself, with ye advice of my council of officers nominated, to whome the greate charge and trust of so weighty affaires is to be committed; and having good assurance of yor love to and courage for God, and the interest of his cause and of the good people of this Commonwealth: I, Oliver Cromwell, Captaine-Generall and Commander-in-Chiefe of all the armies and forces raised and to be raised within this Commonwealth, doe hereby summon and require you, Praise-God Barebone, esquire (being one of the said persons nominated), personally to be and appeare att ye Councill-chamber in Whitehall, within the citie o

Westminster, uppon the 4th day of July next ensuinge the date hereof, then and there to take upon you the said trust unto which you are hereby called and appointed, to serve as a member for y^e Citie of London; and hereof you are not to faile. Given under my hand and seale the Sixth day of June, 1653. O. CROMWELL."

Of Barebone's Parliamentary career, history gives us the fullest details, and yet, within seven years later, because he still remained true to "the cause," Pepys tells us he twice had his Fleet-street dwelling injured by the mob, a mob that lighted fourteen bonfires between Fetter-lane and Temple Bar in honour of the Restoration. His son Nicholas was a great builder and projector, was founder of the Phœnix Fire Office, resided in Crane-court, in that very house (subsequently the home of the Royal Society and the Scottish Corporation) only recently destroyed by fire. But why the name was called Barebones we have never been able to learn; one thing is certain, documents before us have the signature, "Nicolas Barbon," although history has quoted him as "Damned Doctor Barbone," but whether on account of his extraordinary building speculations and the order he gave to his executor not to pay his debts after his death, is a question not far from solution, and worthy of a little attention to those interested in such matters.

TURKISH COTTAGES.

ROUGH AND FINE ART IN TURKEY.

THE present not a little uncertain position of the Turk, and his very place in the European community of nations, must and certainly ought to rouse attention to his art and artistic doings, and to his position as a builder in Europe, surrounded as he is by so much that is remote from him, all ways looked at. Nay, the question concerns not him alone, as an Eastern man, but it involves that most curious of questions,—the inherent differences between the Eastern and Western races of men, differences so essential and so wide apart. In fine art and building, how much of diversity is there to be found between, say, Constantinople and "Middle-Age' London, to say nothing of our modern and rebuilt city. The cottage homes of Turkey and the cottage homes of England are wide enough apart, and are worth glancing at. How much do *we* not owe to the East, to use that general term, and what would the state of things be even here were but the "Eastern element" eliminated entirely from English home life? It would take many pages to catalogue this fairly, and truthfully, and not a few things and items might start up, a little to the surprise of those who look at passing events as but passing events.

It may, therefore, be of some interest to describe, as far as may be, the dwelling and cottage home of the Turk and the Turkish soldier, and its surroundings, and to picture for a moment the art to be found in and about these Eastern homes. We shall do this as simply as may be, and thus enable the reader to realise to himself the home of the common Turk and the Turkish soldier. It may clear up a mystery or two concerning him and his present work, and help to show how he has been induced to embark in it. Turkey proper, it is to be borne in mind, is an Oriental or Eastern country, and to be looked at as such to be at all understood. All nations and nationalities are not alike, and the broadest of distinctions is to be drawn between the "Eastern" and the "Western" man, for they are in reality all but separate creations. All is different. But for our present purpose the home of the Oriental man will serve sufficiently to distinguish him from those who in Europe surround him. He is an Asiatic in Europe, and his primitive home and place of birth was the East,—all that he now has, and his virtues, and his failings alike. And more than this, if he is to be "improved," as the term is, it will be in the end as an "Eastern." A curious question and problem indeed, and a hard one.

A Turkish village is a place *per se*, and the dwellings and cottage homes in it are things again utterly inconceivable to those who know only of our own cottages and humble country homes, even in the most out-of-the-way and forgotten places, and however neglected and forsaken. Turkish cottages, then, on the outside, are but simple square boxes; commonly they measure from about 12 ft. to 14 ft. The walls of them are built up of rough stones, as they are picked up, of all shapes and sizes, and are cemented together with *mud* merely. The roof is always flat, and is covered over with earth or thickened mud. This is supported on thick boarding, laid from wall to wall, over rough beams as cut from the tree. It is curious to note that on this flat and rough roof there is always a stone roller of small size, for the purpose occasionally of flattening and hardening the upper surface of it. To this simple abode *there is no window* whatever, the light coming in through the all-but ever open doorway. To the *door* there is no fastening even, but a billet of wood suspended over the top of it, which falls down when the door is closed,—when it is. Outside there is always hung a peg with which this inside fastening is pushed up when any one desires to enter the room. The walls on the inside are plastered over with mud, mixed with short bits of straw. There is no firegrate of any kind; but the fuel, commonly wood, is piled up under the large open chimney, often the ends of it appearing through the top of it outside, and thus visible from the street. On entering such a house, say the dainty travellers, it always appears to be quite dark,—and so, indeed, it is!

But there is some comfort to be found even here; and the Eastern man is not without his resources as well as his Northern foes and fellow-creatures. It must be noted that such a house as this is commonly wholly without what is here called *furniture* of any kind or sort. The Eastern man takes his furniture about with him. Richly-coloured carpets, which we in vain try to rival, either in colour or pattern, are spread on the mud floor, and a few nails driven into the mud walls of this humble room serve to hold up out of the way the articles of clothing and other matters not in use brought into it. Thus, with a bright, sometimes cedar-wood fire, and the perhaps faded and worn coloured carpets, or rugs, and "hangings" on the walls, this small tenement with, by the way, in addition, well-stuffed cushions to recline on, becomes not only a human habitation, but a comfortable *home*. However old and worn the carpets and hangings, they to the last retain more or less of their fine colour,—faded, may be, and worn, but there it is.

This, then, is the dwelling of the modern Turkish soldier, *when at home*, and it is the common and usual type of house or "cottage" all over the East, more or less; and whati s most curious is, it has been so from a time stretching back to far beyond written record and history. In the sculptures, to be found more or less abundantly all over Asia, these small houses are to be seen, and the rock-cut "drawings" of them show that they are not to be distinguished from those built yesterday and *to-day*. It is wonderful, indeed, to find how, in spite of perpetual progress, the world holds to its own, and persists in doing what it always has done. Truly, a thousand years are but as a day; and yesterday, to-day, and to-morrow are one!

But there is more yet in these primeval cottages, for the antique Greek spirit has done its part in the designing and furnishing of them. One or two very curious items may be noted. We have spoken of the small roller used to flatten the mud roof. It is found in practice ineffectual to do its work thoroughly, so that much of the earth in the corners of the roof and near the edges is loose, and so favours the growth of grass and luxuriant weeds, and acanthus and other large leaves, and the consequence is that these appear above and hang over the low parapet surrounding the mud flat, and thus have given rise,—so Sir Charles Fellowes argues, and we must need agree with him,—to the scroll and leaf ornaments, cut in marble, to be found on the antique Greek samples, and often to be seen conspicuously on coins and bas-reliefs. What will *accident* not do? And this thought may well take us back in time to the *beginnings* of the Turkish hut building; for in Asia Minor, all over it, may be found bas-relief representations incised into the solid rock on the mountain-sides of such of these very cottages as are lived in by the modern Turkish soldier of to-day, when at home, and when his wars are done. Three thousand years back is but a moderate estimate, as it is most surely a safe one; and there is actually no difference between the cottage home of the working man and the soldier then and now. Of such huts as these, many, certainly, if not all, of the antique cities of Asia were in the main formed, and the streets of them, famous as they were and are in history and song, were lined with such as these, differing in details, but in the main the same. The walls and "defences" of the antique cities and the mighty art-filled temples made up all the solid and enduring work in them, and are all that has come down to us, or that remains to assure us of their past existence; for, as has been well observed, such slight structures as these houses could not have lasted a single century "except as dust," when once abandoned. From dust they came, it is certain, and to dust they have returned, and will yet again return, let who will be lord and master over them.

And there are other things and items in these rude cottages of the Turk, and the Turkish soldier, which might perhaps be sought for in vain in more favoured places and in more polished homes. We refer to the art to be found in the lamps, pots and pans, and plates and basins, and other and not a few articles of domestic economy. That these are different from things about us but few will doubt. Many of them are of true Classic type, and form, and origin, and transport the mind, in spite of other surroundings, to the days and doings of antique Greece. The common house-lamps are commonly of tin or earthenware, and the bottles, and ewers, and plates, are not only of Classic forms and ornamentation, but are carried about by the women and girls in just the same way as the like things were by the Greeks and Romans in antique and Classic days. We may, indeed, here see the past in the present, so that the Turk, as he is, is of interest in other ways than as a fighting man. The general tendencies of the time are towards a sort of settled uniformity, so that any evidences, even in out-of-the-way places, of originality, of art work in common things must be of more or less interest, and the Turk, with other Eastern nationalities, yet works on in the old way.

DRAWING IN ELEMENTARY SCHOOLS.

LAST week the drawing examination, so-called, took place in the elementary schools throughout the country that participate in the Government grant for education. The examination was interesting in itself, and in evidence of the enlarged scope, in a useful direction, of public elementary instruction and training. This was only one of the annual examinations conducted in these schools under the direction of the Science and Art Department, South Kensington; another for black-board and other work comes off in November in each year. Like most other educational examinations, whether of scholars or teachers, the drawing examination in elementary schools is conducted under rigorous conditions. It is held on the same day simultaneously throughout the country, obviously to preclude the possibility of copying, coaching, collusion, or special preparation. Examiners or managers are appointed to superintend the proceedings, who must not be connected with the school staff of teachers. To these gentlemen are consigned sealed bags containing the exercise papers to be used by the scholars, and instructions for the conduct of the examination. At sharp ten o'clock the bag is opened, and active proceedings ought to commence by the distribution of the drawing-sheets, but the examiners have first to read, mark, and digest the instructions which should have been in their hands for two or three days previously. The papers were sent to the "correspondent" on the 8th instant, but the responsible "examiners" had no chance of perusing the instructions before 10 a.m. on the morning of the 11th, when their immediate duty was to distribute the papers to the scholars, and set them to work. It would not be too much to let the examiners have draft copies of the instructions in anticipation of the examination, two pages of printed foolscap, one of them very closely printed, cannot be assimilated in five minutes, and it is their due to be apprised of the matter contained in "520a, see especially par. 4," before they "duly fill it up and sign it." They should also know something of "576a," and other matters referred to in the form ["F. & T. 5,000 1-78 2-21-39"]. As hitherto conducted, the "managers or superintendents" at these drawing examinations have been kept too much in the dark as to their functions and powers, and it may possibly become impossible to find gentlemen to accept an office in which they may find themselves neither useful nor ornamental.

To return to the examination. When the sealed bags of papers are opened, and during the execution of the exercises by the scholars, masters and mistresses of schools are interdicted from being in the room, but assistants and pupil teachers may be present to assist, and valuable service in this respect they render.

The exercises comprised freehand drawing, first and second grades; the first very simple, a *fleur-de-lis* ornament, for which forty minutes were allowed; the second-grade exercise was more elaborate, and an hour and a half, not a minute too much, was allowed for its execution. In addition, there were two grades of geometrical drawing, one in perspective, and two grades in drawing from models. The times allowed for the copies were forty minutes, an hour, and an hour and a half, according to the subject. The results of the examination will not be known for some time to come. The degrees of merit are "excellent," "proficient," "good," and "fair," and schools are credited and participate in the Government grant for every scholar who gives evidence of having been taught drawing. The second grades in freehand, practical geometry, model drawing, and perspective, are eligible to receive prizes according to their respective merits; these prizes include boxes of water-colours; of crayons; of mathematical instruments; drawing-board, T-square, and angles; copies of Cotman's pencil outlines; Wornum's "Analysis of Ornament"; Lindley's "School Botany"; Burchett's "Practical Geometry" and Burchett's "Perspective"; Binn's "Orthographic Projection;" Stanley on Instruments; Puckett's "Projection of Shadows"; Davidson's "Drawing for Machinists," &c.

The scholars presented at the drawing examination belong to standards two to five inclusive; the children of standard one, the lowest, are not taken. The freehand exercises have, in all cases, to be copies, enlarged or reduced, of the lithographed sketch, each paper being identified by the name, at full length, and age of the scholar, with the name and address of the school, all written at foot by the scholar himself. The exercises consist of vases, geometrical figures, Egyptian and Grecian ornaments, and elaborate artistic floral devices, embracing a great variety of curved lines. The concluding duty of the examiners is to count up the papers, the used and unused, to certify the numbers, seal up in the bags, and despatch to South Kensington by the first post.

LEFT-HANDED ARTISTS AND WORKMEN.

A POPULAR novelist in the pages of a daily contemporary has lately opened the question of left-handedness. It would be more correct, perhaps, to say that the novelist re-opened the subject, for it is one that has been treated of to some extent in the *Builder* in connexion with other unutilised resources.* The present writer had some words to say on the subject of left-handedness and its utility under every circumstance, and, if we remember aright, the conductor of this journal quoted the example of a well-known sculptor, now deceased, who lost the use of his right hand, and by practice managed to write and do other duties with his left with tolerable ease. We hold a strong belief that both the left hand, the left foot, the left shoulder, and left eye could be trained and educated in early youth to perform the same function as the right with equal facility, and no reason exists to the contrary why left arms or limbs, &c., should not possess equal strength with the right. What gymnasts, rope-dancers, acrobats, and others of that "kidney" can do by early training, architects, artists, craftsmen, and clerks could do; and further, what men could do, and have done, and are doing at the present time to some extent, women can do by training and practice. In the building branches the present writer knew, in the course of his experience, several workmen who could use the hammer, saw, plane, and other tools in a left-handed direction with equal facility to what they could do with their right hands. To be able to use the left hand with ease is an acquisition in several species of work in the building branches, and the want of the power has led to the necessity of supplying certain tools and appliances that could be done without, if the left hand were available in the instance of the workmen engaged. A left-handed carpenter, or one that could use the left hand as well as the right, is a very "handy man" in a different acceptation of the term from that generally used. In stone as well as timber work, in metal-founding or forging, in plastering as well as painting, in bricklaying as well as slating, the use of the left hand in various situations will be found a great advantage to the workman. The same may be written of the work of the builder's labourer or the farm or agricultural labourer. There are descriptions of farm or field labour where two men working in parallel furrows are unable to work exactly opposite to each other, on account of both being unable to use their left hands as well as their right. The consequence is that one labourer has to divide his portion of the work into short lengths, one man working with his face turned in one direction and the other in the reverse, instead of both working with their backs turned the one way. In many forms of field labour, digging, trenching, cutting furrows, or potato planting in ridges, the farm labourer moves backward. It is a mistake, we think, in any system of gymnastics in public schools not to train the youths to the use and exercise of the left hand and other almost dormant faculties in connexion with man's physical and mental nature. There is a lady not far from our elbow at the moment of our writing these observations, who can use the needle with the same facility with her left hand as with her right, and consequently sew and trim, and perform other operations. Owing to a sprain in her wrist some years ago, which for a time incapacitated her from using her right hand, the lady learned to write with tolerable facility with her left hand. At table she can utilise the left in performing several operations which would possibly appear awkward to other critical ladies. To cut a slice of bread or carve a joint with the left hand as well as the right is a useful acquisition, and ought not to be considered awkward. In parts of the sister kingdom there are kinds of one-shouldered spades (lefts and rights) called facks or fakes, which agricultural labourers use, and some old left-handed and right-handed hinds prefer these spades to the more modern pattern. In our boys' and girls' School Board schools it is well worthy of the attempt to begin a system of training for developing the general use of all our moral and physical faculties, left and right, so that in another generation or two, the loss of a limb or an arm would not become such a sore loss to the sufferer as it is at present. The sudden loss of a right hand to a City clerk, if he has made no provision, means indigence to him. Could he use his left as well as his right he could continue in many cases in employment without any loss to his employer. The writer has known instances of carpenters and joiners earning a good living who had lost the use of one of their hands. They became jobbing workmen, packing-box makers, and makers of general domestic articles. The loss of one arm was supplied by an iron appliance or rounded bar.

We even witnessed one of these iron-fisted "Chips" driving a brad or a nail home with a blow of his very handy, handless iron arm. We know a timber-legged, *i.e.*, one-legged workman in the jobbing building line, who could climb or mount a ladder with the greatest ease, and do a piece of bricklaying or slating work with the greatest safety on scaffold or roof, no matter how high.

What then?—Well, Mr. Charles Reade's "Coming Man" has long since come, but as he has missed his facilities, he is but imperfectly educated. His sons and daughters, and grandchildren and great-grandchildren, have alike been negligent, and content with a smattering of education and training, like their ancestor. The eye is still only half-educated, and the left eye particularly is weak, and both wink more than they work, and the eyelids are closed for too many hours of the precious 365 days. There is only one mouth to fill, while there are two hands to work, and two limbs to assist, two ears to hear, and be ravished, and two eyes to see and enjoy nature and art. Abstractedly, we could carry the subject to an indefinite length, but we are content for the present to give a short practical exposition of the value of left-handedness, so-called, and the necessity that exists for developing man's physical and other faculties, long dormant or little utilised.

* See Vol. for 1872 (XXX.) July 28.

Graving Dock on the Thames at Blackwall.—The new graving-dock for Messrs. R. & H. Green, shipowners and shipbuilders, of Blackwall, is now rapidly approaching completion, and is expected to be opened early next month. The dock is entirely faced with granite. The engineers for these works are Messrs. Kinipple & Morris, of Westminster and Greenock; and the contractors, Messrs. George Baker & Son, of Stangate, Westminster.

TELEPHONY.

THE progress recently made in the science of telephony, or that which is yet prospective, induces M. Henri de Parville to write in the *feuilleton* of the *Journal des Débats* a fantasy to the realisation of which, it must be owned, only technical difficulties seem to be opposed. In telegraphic practice, says the writer, an apparatus which leaves no traces of the despatch is considered inefficient. After the talking telephone, it is necessary that the writing telephone should be created. An instrument must be invented which automatically writes down a conversation, and, so to say, stenographs the words spoken within its reach. There are already phonographs which mark the sound. Each sound impresses itself upon a paper by a more or less curved line. But that is not sufficient; it is necessary that this writing should be readable, and that is not easy to attain. Even stenography, to be rendered into ordinary writing, involves some trouble, and greater requirements are made at present. Inventors are trying to solve a problem which appears at first sight extremely strange. It is the object to stenograph automatically all the words of a conversation held in a room, and to fix them for ever; and as it is always inconvenient to read complicated and confused writing, it is intended to perfect the improved telephone until it is able to read its own writing itself, and to reproduce the words fixed by its means. It is intended to invent a machine which listens to a speaker, writes down his speech, and later to reproduce everything he has said, word for word, preserving also the sound and expression of his voice. It is the intention, so to say, to have a speech or a conversation taken down, to preserve what has been written, and to reproduce at any chosen time, say ten or fifty or a hundred years later, the same speech or conversation. It is exactly the story of the frozen-in sound, related by Rabelais in "Pantagruel," only the science of modern physics intends making this story come true. Without entering into details, which would be premature, it may be shortly pointed out how it is to be arranged in order to put a speech, as it were, in one's pocket and to redeliver it without troubling the original speaker. In case it should be supposed that this is only a dream, it may be added that an eminent engineer, M. Marcel Deprey, has already made several remarkable apparatus for reproducing automatically the human voice; he continues to labour unceasingly on his project, along with M. Nopoli, and there is every probability that before very long it will be practically realised. A thoughtful inventor, Mr. Cros, has already proved that the solution of the problem is possible with the means at his disposal, and Mr. Edyson has constructed a first machine, with striking results. These talking-machines, it is said, will exceed by far the Faber machine, exhibited last year in the Grand Hôtel at Paris. The principle upon which the machines are constructed may be explained as follows. The operator talks against an apparatus containing a membrane sensible to vibration, as well as a point touching a strip of paper driven past by a clockwork. The voice causes the membrane to vibrate; this acts upon the point, and the latter draws upon the paper lines of various forms, and corresponding to the inflection of the voice. The variously shaped lines, consequently, represent the words: a new kind of stenography. Thus the sound of words would write itself down as we write down the different sounds of music, by special marks and symbols, and thus the eye would be able to read off the sounds of the words with all their details, elevation and depth, emphasis, &c.; and an experienced reader would be able to reproduce for himself the speech, in the same manner as the musician reproduces for himself the music when he reads the score. If this is attained, the word is rapidly seized, fixed, and may be stored; what remains to be done is to get it into an instrument which will give it back audibly at any time. Let us imagine, now that the graphic portrait of a speech is carved out in its lines like a stencilling-plate, that this pattern, conducted past the point, forces the latter to follow its outline, that the point acts upon the vibrating membrane: the whole proceeding would be reversed, and the telephone would speak, in consequence of the vibrations of the membrane, and be able to deliver a speech as a barrel-organ makes music. We should have the cast of the speech, and strike off copies as often and as many as we like. As already pointed out, the apparatus constructed by Mr.

Edyson performs wonders. The operator speaks by the side of it before a kind of speaking-tube. The vibrations take themselves down in the interior of the machine on a strip of stanniol, propelled at a regular rate by a cylinder. A simple arrangement cuts out the metal leaf by the lines drawn upon it, and thus the pattern is ready. If the latter is now conducted past the point, so that each cutting acts upon it, it is only necessary to put one's ear to the tube of the telephone in order to hear the whole speech recorded before. The voice is heard, the speaker is recognised, only the voice retains a somewhat nasal sound. If a conversation is recorded in this manner, each person taking part in it could be recognised. It will be seen that all this is founded on reality. The conversation recorded to-day might be held over again at any moment; the present taken from life, and handed over to posterity. Thus the eloquence of a speaker, the lecture of a *savant*, might be heard again, although the speaker or professor had long since peacefully reposed in his grave. It would be possible to preserve the voices of those dear to us, past life, and to hear them speak again, to recall them to life. The old portrait is there, silent and immovable; but now it speaks to us; its voice sounds as in life, and the great-grandfather will talk to his great-great-grandchildren. Who will say, then, that he ceases to exist?

AID WANTED FOR INDIA.

NATIONAL INDIAN ASSOCIATION.

MISS F. DAVENPORT-HILL has sent us the following extract of a letter from Mr. Sasipada Banerjee, of Barahanagar, Calcutta, January 11, 1878. We gladly insert it, with the hope that it may lead to what is desired:—

"It would greatly help the *Indian Workman** if you could send us blocks of engravings of men and women who have risen from the ranks by perseverance and devotion to work; of those who are devoting their life in the cause of the working-men's movement in England and other countries; of English sites and public buildings, engravings of machines, steam-engines, &c. We deal with all subjects (excluding religion and politics) which tend to the intellectual, social, and moral improvement of the working class. We endeavour to make it at the same time entertaining and instructive. When sending out the engravings I should like you to send me some pieces of raw block, not engraved, to be worked on here. Your committee can in another way help the movement, and that is by sending us books and reports bearing on the working-men's movement in England. Can you manage to send us regularly the *British Workman* and some of the illustrated papers intended for children. The size of the paper is royal 8vo. The engravings should not be thicker than printing types. Blocks showing works of art, &c., will also be acceptable.

About the nature of books we want, I beg to tell you that we are greatly in need of reference books. It is my object to make a collection of these in the Institute, and in this, I think, you could greatly help us. I was thinking of writing to Mr. Thomas to see if he could get for me a set of second-hand British Encyclopædia, and as you have kindly written to me on the subject I cannot do better than mention it to you. I have no idea as to its price, but should be glad to bear the cost if it is not too much. . . . . Novels, books of entertainment, and scientific books will be acceptable. But I should specially beg you to make a collection of reference-books, including a copy of "Men of the Time" for us, as these we are much in need of.

We have nothing like prize books in this country. You have in England prize books of various sorts, suited to men, boys, and girls, which, if sent out, would be most welcome. In our prize-givings, the books we give have no outward attraction, some have no binding at all, and there is nothing like the entertaining and instructive pictures in them which are to be had in such books in England.

Books of entertainment, giving a correct picture of English society, of what there is noble and grand, and what has given the English the position which they now hold are wanted. Such books sent to any part of the country, and circulated among our educated young men, would do a vast amount of good."

The magazine alluded to above is called the *Bharat Sramajibi*, or *Indian Workman*. It consists of eight pages, 8vo., with woodcut illustrations, price one pice a number, monthly. It is "an educational paper" in Bengali. Its object is to provide appropriate reading for the working classes. It is published at Barahanagar, a suburb town of Calcutta, where there are jute and other manufactories. Mr. Banerjee is the editor, and he promotes various schools and other useful institutions in the place.

Miss E. A. Manning, 35, Blomfield-road, honorary secretary of the Indian Association, would gladly undertake the transmission to Calcutta of anything sent to her.

* A small magazine.

MIDDLE-CLASS BUILDINGS IN FLATS IN KENNINGTON-ROAD.

"CLAYDON-BUILDINGS" is the title which has been given to a large block of new buildings in flats for the middle classes, which has just been erected in Kennington-road by Mr. Sansom, from designs furnished by Messrs. Fowler & Hill, architects. The site upon which the buildings have been erected is between East-street and Union-street, immediately to the west side of Kennington-road; and, with the view of improving the approach from Kennington-road, the owner has purchased property at the East-street end, which is to be taken down for the purpose of widening that thoroughfare. A low and dilapidated class of houses stood upon the site of the new buildings, and these were all cleared away before the commencement of the works. The site is angular in form, the buildings having two main frontages, one to the east and the other to the south, with an open area in front containing about 10,000 superficial feet, which is intended to be ornamentally laid out as a recreation-ground and garden. The east frontage of the buildings is 100 ft. in length, and that on the south side 90 ft., and the entire space on which the buildings stand occupies an area of about 14,700 superficial feet. The buildings are 55 ft. in height, and contain five floors, each floor, from the ground to the top story, having a uniform range of bay windows, with balconies and balustrades carried along the foot of each floor window, there also being similar balconies at the rear of the buildings. Projecting beyond the main face of the two principal frontages there are covered staircases, built of fireproof material in brick and cement, and the floors of the balconies are also composed of the same fireproof material. The main face of the several frontages is in stock brick with ornamental red brick bands, and stone window-dressings. The main cornice is surmounted by an ornamental iron railing, enclosing a flat roof, for the accommodation of the tenants,—not only for recreation, but for clothes-drying purposes. On a portion of the site a washhouse, 25 ft. in length and 10 ft. in width, has been erected for the general use of the tenants. It is provided with coppers, wash-tubs, and every other convenience for washing and laundry purposes.

Internally, the buildings contain thirty-five tenements in all, with accommodation estimated as equal to a population of about 300. Each tenement contains four rooms, in addition to a small kitchen, and an external larder, with access from the interior. The four apartments in each tenement consist of two living-rooms and two bedrooms, in addition to water-closets, and other domestic conveniences. The kitchen to each tenement includes a range containing oven and boiler, together with dresser and cupboards. There are likewise dust-shoots for each floor, which are fixed outside the building, and to which there is easy access.

DANGER TO TREES IN STREETS.

A STATEMENT was made a short time ago to the effect that several gentlemen had offered to subscribe considerable amounts for the purpose of having the Pentonville and Euston Roads planted with trees. Highly laudable as such a display of public spirit may be, as tending to change for the better the generally dreary aspect of London streets if the example thus set were extensively followed throughout the metropolis, it is to be feared that a great part of the funds and trouble expended would be wasted. A significant case has come under our notice. Visitors to Cologne will remember the numerous handsome elm-trees growing round that city and on its glacis. It is reported that a number of them, near the Harbour, as well as those between the Gereonsthor and the crossing over the railway on the road to the gasworks at Ehrenfeld, have died off. It was at first supposed that the cause of their "drying up" was the *Eccopto gaster*, a species of bark-beetle somewhat less dangerous than the destructive *Hylurgus*, *Bostrychus*, or *Strangalia*. Now, however, that the trees in question have been felled, and their roots and the soil from which the latter drew their nourishment have been examined, there is no longer the slightest doubt that the vicinity of gas-pipes is the sole cause of their decay. It has been denied that gas-pipes laid close to trees could injure them. It has been argued (for instance, in Berlin) that though coal-tar is injurious, gas is not. But gas cannot be made without the admixture of coal-tar, and some trace of the latter always remains with the gas, notwithstanding the care of gas-manufacturers to remove it. Any one who will take the trouble of looking on while old gas-pipes are being removed will notice the soil round them to be of a bluish-black colour—an effect of the coal-tar which has combined with the soil, testifying to its presence only too plainly by its smell. The pipes may be laid so low as to avoid their being affected,—*i.e.*, contracted or expanded,—by changes of temperature, and prevent their joints ceasing to be air-tight; but for all the care taken in laying them down, they would still not remain so. Of course, we know that the iron pipes do not permit coal-tar to percolate in drops, but they allow of the escape of gas, because iron is porous; and gas contains coal-tar. But if this escape takes place in new gas-pipes, which are now all cast vertically, it must happen in a still greater degree in old ones, which were unfortunately cast in a horizontal position, and which are in consequence of uneven thickness and more uneven density.

In the case at Cologne, the gas-pipes are laid very close to the trees in question. In digging out the decayed trees, it appeared that the tar contained in gas, in the course of time, had penetrated the soil, and coloured it bluish black. The suctorial roots of course grew into this soil, and were killed. The larger roots growing downwards, and others reaching to some distance, were insufficient to supply the required nourishment to the tree, in consequence of which it gradually died off. The roots, on being examined, showed at a glance whether they had remained on healthy soil or had come in contact with coal-tar. The former, both outside and inside, are of a brown colour, and are easily broken. The latter betray by their smell the presence of tar, and exhibit the bluish black colour not only in their bark, but also in their woody fibres. The above facts demonstrate that a tree has to be protected not only against vermin but also against surroundings which would be injurious to the vital juices that circulate in it.

SYDNEY.

SAILING along an awful coast,—almost under beetling precipices, high above the masts of the ship,—many a score miles long, the voyager suddenly perceives a gap in the endless cliffs. Although this opening is nearly a mile wide it seems to require a pair of gates to bar the entrance to a scene of supernatural beauty. These cliffs resemble the walls to a garden, for the moment the vessel enters it can sail either to the right or left of the wall, or at right angles to the before mentioned coast of overhanging cliffs 300 ft. or 400 ft. high; but the scene that bursts upon the view can never be forgotten, and it is doubtful whether it can be surpassed upon this planet. The sun shines unmolested in a clear blue sky, a balmy breeze wafts the fragrance from a variety of never leafless trees which all around cover rounded hills 400 ft. high. Turning to the left, several capes and bays are passed on both sides, each with a single exception having steeply sloping shores. Nestling amongst the trees palatial residences can be descried, and at last one of the finest cities inhabited by the wealthiest, most contented, and most patriotic of the English people, is seen. It is situated all round three of the bays, where the shores are flat,—two of which are full of ships which sail from the metropolis to this beautifully-situated part of English territory; some of these ships perform the journey in forty days and some in eighty, but if they were eighty weeks performing it every Englishman ought to see the Queen of English cities,—Sydney. Landing at the bay known as the circular quay, we are at once in the midst of some of the noblest architecture in the empire. It is just ninety years since the first

party landed there, consequently all that we behold is modern. We can proceed four or five miles up either George-street, Pitt-street, Castlereagh-street, or Elizabeth-street, from this point and find no gaps in the houses on either side, but before one mile is reached our admiration of the architecture ceases. We travel some two miles up George-street before we reach the only railway station, but hundreds of 'buses and Hansoms are ready to carry us the distance, though we shall be jolted as we never were before, and if we are nervous old ladies we shall begin to count our beads, and rejoice greatly when our journey is ended. This, however, is not attributable to the vehicles, but to the atrocious roads, for there is neither wood pavement, asphalte, nor granite boulders—in fine, there is nothing but what nature made. The city is built upon a buff sandstone, which underlies nothing, but which soon goes to powder. Sydney is built of this stone, which works almost as easily as Bath stone, but which is never sawn. The few bricks that are used are of a dismal colour and bad in quality, so bad that all houses built of them are cemented over, and the quality of the workmanship would make any London jerry-builder blush, yet there are no speculating builders in Sydney; this bad work is because few architects are employed, and no clerks of the works. There are no Building Acts and no district surveyors. Your London carpenter, mason, and bricklayer would think their fellow-workmen were working for their lives could they see them, but all this high-pressure haste is fatal to sound workmanship: every scamping trick that man can invent is resorted to, even where the most vigilant architect is employed. These operatives get from 1s. 3d. to 1s. 6d. per hour, which is as good as 1s. 6d. in London, but it must be admitted that if they had worked as hard in London as they do here they would have earned as much there. For some miles the pathways are flagged with the same disintegrating stone as that with which the better buildings are erected; gutters are also formed with large blocks of it—gutters 2 ft. 6 in. wide and 1 ft. deep. When it rains these are filled with water, which at intervals disappears under stone bridges which cover large cesspools: in these the waters roar and thence find their way in subterranean channels to the harbour. As far as the rain which falls upon the ground is concerned, this is not objectionable; but immediately under the flags are laid pipes from the back parts of the houses which empty themselves into the open gutters, and whatever solid or liquid each householder likes to send through these pipes, he can do so with impunity, or he can deposit it in his cesspool. Now this is a state of things abominably intolerable in a city of Englishmen; but, perhaps, it is out-heroded by the fact that more than half the people have nothing to drink, or make other drinks with what rain-water falls upon the dirty roofs of the houses: these roofs are of corrugated iron, wooden shingles, or slates. The water is caught in cylindrical corrugated-iron cisterns, and as no rain falls for three months, the action of the atmosphere upon it, and what is washed off the roofs, make the drinking-water as unfit for that purpose as the liquid in the cesspools; consequently the death-rate of a city just hatched, as it were, and enjoying a most life-giving climate, is as great as it is in some murky, manufacturing Yorkshire town. Another result is that the houses and the air are crowded with visible and invisible life that owes its existence to filthiness and idle habits; mosquitoes, flies, "Norfolk-Howards," fleas, dragon-flies are terrible pests, and send many bimana back to the northern part of the empire. Where such creatures flourish, man withers; they are deadly enemies, and one must ultimately be vanquished. Is it to be man or not is a question of serious import to the welfare of the Australian colonies; if they are to be peopled these pests must be fought more vigorously, and the example set by England must be followed. The children must not vainly fancy they have more wisdom and experience than the parent. In the building business the conceit of the Sydneyite is particularly noticeable. The good example set by London is derided. In Sydney they go their own way about it, and make a sorry mess of it. The builder is not a capitalist; in fine, he is not a builder, but a journeyman mason, bricklayer, carpenter, and plumber who, out of his excellent wages, has saved a few pounds. He sees an advertisement that separate tenders for each of the above trades are invited by some architect; he goes forthwith to the architect, and is allowed to take the drawings and specifications away from four p.m. to ten a.m. the next day, and in this time he does what a London quantity surveyor would have 50*l.* for. He sends in his tender which may be 2,000*l.* or 500*l.*—for this difference is not at all unusual;—and if his be 500*l.* he gets the order to proceed, but if more he is surprised that he hears nothing about the job; and when he passes the office he calls in and asks for a list of the tenders. The architect laughs at this simplicity, and informs him that such breaches of faith never occur in Sydney, for the public would see what scandalous muffs Sydney builders are, as the highest tenders would be four times as much as the lowest; yet, in the very next list of tenders the builder who was the highest would be lowest. This is because he is only a young journeyman carpenter or bricklayer, and not a builder, in the London sense. He goes on for a brief period, and loses what he saved as a journeyman, as well as defrauding his creditors, and then he becomes a journeyman carpenter again. His timber-merchant and others get such enormous profits that they can afford to lose much in the shape of bad debts. The only competition amongst timber-merchants is that each tries to sell more than the other, but never at a lower price. Nothing is ever heard of standards of deal, or loads of timber: all is sold by the 100-ft. super., in inch thickness. A shipload of timber arrives, and its contents are advertised for sale by auction, in lots never below 100*l.* in value; so that the innumerable penniless builders are shut out of these auctions. The price it runs up to is, for colonial pine, never above 6s. 6d. per 100 ft. super. as inch, but it is retailed out to the builders at 18s. when sawn into boards or scantling. Another class of men besides timber-merchants are doing well in Sydney, viz., the auctioneers. There happens to be an allotment mania, such as probably never was seen in any country before. Some scheming speculator will buy a few acres of land covered with heavy timber,—as all the land is in the neighbourhood of Sydney. He gets a land surveyor to plot out upon paper streets 40 ft. wide and 300 ft. apart, and divide each side of each street into allotments of from 30 ft. to 70 ft. frontage, and number them; stakes are then driven in amongst the trees, and in a week the allotments are sold by auction, at prices ranging from 10s. to 10*l.* per foot frontage. The process in England is to make a good metalled road, with granite curbing, gutters, and sewers, but in Sydney the street will be built upon from end to end before a tree is cut down in it. The class of houses that are erected in these streets are generally devoid of architectural pretentions, except what emanates from the brain of the iron-founder, for about 5 ft. in front of the house is a cast-iron fence, and over it a cast-iron verandah, or rather balcony, with a corrugated verandah over that. All this cast-iron work is tastefully picked out with paint. There is a 9-in. wall between the balcony of one house and the next. The rooms are loftier than in England, and the doors hail from San Francisco, as every mail steamer brings some thousands of them; and the market is so glutted with them, that at the auctions,—where they are sold in lots of about 100,—they only fetch about what the material would cost in Sydney, and there is a duty of 2s. per door upon them. Two years ago the lowest price realised at auction was 15s., now it is 7s. We know that in San Francisco every building operative is now working for his bare board; but as this is a state of things that cannot last, they will soon desist from sending their doors here to be given away at auctions, when of course it will pay to make them in Sydney.

Some thousands of Chinese are located in Sydney, and their chief occupation is making furniture: this is much inferior to even that of Curtain-road, but it is much cheaper than the latter, and an export of it will probably soon take place from Sydney to London. It behoves London cabinet-makers, therefore, to avoid Sydney. The Government is giving free passages to cabinet-makers, carpenters, bricklayers, blacksmiths, masons, plasterers, brickmakers, navvies, bricklayers' labourers, and farm labourers. It was giving them also to engine fitters and drivers, foundrymen, weavers, and a host of other useless men in a colony, and there is no doubt that hundreds in this last category would be glad if there were any workhouses in the colonies. Many of them were sent out to country towns, where there was nothing but the cultivation of the soil for them to be employed at. A Birmingham button-maker will take to this just as readily as a horse will take to braying like a donkey,—which, by the way, is as scarce as the dodo,—and the farmers would rather have a draper than an artisan in iron. It is very unfortunate for them, as they happen to be at a discount all over the world. If they must emigrate, let them do so co-operatively, as has been set forth in the *Builder*, and eschew the colonial farmer altogether. There is no doubt they could by such a plan be metamorphosed from ironworkers to successful farmers, at their own expense, in a short time. It is deeply to be deplored that there should be so many idle men in the British Empire, whilst there are millions of acres of soil in it as ready for their labour as was Venus for Adonis's love. A horse knows nothing about cultivation, but he can be made very useful to the cultivator; so can an engine-fitter. It must, however, be admitted that employers in a colony have no prejudice against a man because he happens to be an engine-fitter or a weaver; but in England, if a man is born a weaver he must die a weaver: there is the workhouse, however, there. It is strange how saucy this institution makes the English workman; it makes him turn his hours of labour into pastime, and manfully resent any bullying from his foreman or master; but in a colony he has nothing to fall back upon, and he will put up with any brutal treatment from his master. This is the only personage he has to deal with, for there are no such middle-men as foremen, managers, estimating clerks, prime-cost clerks, and clerks of any kind. Nine out of ten of the builders keep their own accounts with a piece of chalk, and neither know nor care whether they can pay twenty shillings in the pound or not. "Harum-scarum" is the way of Sydney; and there is no reflection, no studying of posterity in anything. To make money is the guiding principle which is at the bottom of the infamous disregard to sanitary arrangements. So shockingly bad are the Sydneyites in this respect that the people are not commanded to carry the implement Moses imposed upon the Israelites. There is nothing at all paternal in the Government: adulterations, false weights and measures, and other meannesses to make money dishonestly are not exceptional, but the rule; in fine, it would appear the Palmerston Government cast these colonies adrift, just as a father might turn a child adrift whilst his years are units, and the consequence is, they are governing themselves as a child would; and when we compare them with England, we see what a sorry mess they are making, especially in Victoria, — a colony that is loudest in denouncing England as an old fogy.

GARGOYLE.

Newcastle Trade.—On the 8th the steamer *Compton*, 2,800 tons burthen, built by Wigham Richardson & Co., of the Neptune Works, for the firm of Watts, Milburn, & Co., of this town, was tried at sea with a select party, and everything went off to the satisfaction of all concerned. Her engines, of 200-h.p., worked admirably, the vacuum being especially good, which was attributed to the peculiar form of the condenser-joint adopted by her builder, which, it may be remarked, allows of all the tubes being withdrawn, cleaned, and replaced in a single day. The air-pump and the circulating-pump are worked separately from the respective cylinders, and every appliance which the most recent experience can suggest has been supplied, as well as a most complete supply of spare gear. The *Compton* is intended for the American trade, which is now so largely passing into the hands of our Newcastle shipowners. One of the American shippers was present, and told a quaint "stretcher" to illustrate the value of spare gear. He said that crossing the American continent last spring from San Francisco to New York, he met in the cars the engineer of the line, who at one period of the journey volunteered the information that soon the train would reach Ashtabula, the scene of that deplorable accident when the bridge broke, and afterwards the *débris* and the cars took fire and burnt the hapless passengers. On being asked if the passengers would have to get out and change trains he said, "Oh no! the bridge is already repaired." "But surely," said his companion, "that is very sharp work, the accident happened only six weeks ago." "Wal, yes," said the engineer, "our company always keeps a *spare arch!*"

NEW BRIDGE OVER THE REGENT'S CANAL AT GLOUCESTER GATE, REGENT'S PARK.

THE new bridge, the builders of which are Messrs. Kirk & Randall (who built the additional baths and washhouses for St. Pancras, in Tottenham-court-road, and whose tender for the bridge at 13,500*l.* was accepted by the vestry after a public competition) is being constructed to the north-west of the old bridge. The width of the bridge between the parapets will be 60 ft. in the clear, the carriageway being 36 ft. wide, and two footways each 12 ft. wide. The span of the bridge on the square will be 50 ft., and the headway 15 ft. above the water level of the canal. The lines of the bridge and the canal intersect at an angle of about 71 degrees. The brick abutments and counterforts are built on a bed of concrete 3 ft. thick on the London clay; the brickwork, varying from 6 ft. 9 in. to 3 ft. 4 in. in thickness, is faced with red pressed bricks. The ends of each abutment will be finished and strengthened by panelled polygonal buttresses. A stone string-course runs along and round the abutment at a height of 6 ft. from the towing-path. The wing walls will be built on a concrete bed 2 ft. deep, and will be constructed with sunk panels, chamfered and moulded with various ornamental medallions. The panels will be faced with purple bricks. The parapets of the wing walls will be of open quatrefoil design, constructed of red Mansfield stone, extending to the tops of the slopes on either side of the canal, finished by polygonal-shaped pedestals, which will carry handsome bronze lamp-standards. The superstructure of the bridge will consist of ten wrought-iron web-plate girders, each 57 ft. 6 in. long, and 3 ft. 6 in. deep. The girders will be 6 ft. 5 in. apart from centre to centre, strongly braced together by wrought-iron diagonal frames. The girders will be bedded upon and bolted through Aberdeen granite blocks, 18 in. in thickness. The platform of the bridge will be constructed of half-inch wrought-iron curved floor-plates, on which will be laid creosoted paving on a bed averaging 7 in. in depth of bituminous concrete for the carriage-way; the footways of Val de Travers asphalte, 2 in. thick. The two outer girders carry the cast-iron parapet, which is of the same open quatrefoil pattern as that along the parapet of the wing walls. The outer face of the girders will be ornamented with cast-iron moulded string-courses, panels, brackets, cornice, and coping. The polygonal buttresses will be capped with red Mansfield stone panelled pedestals, of design in conformity with the parapets, finished with moulded base stones carrying three-light bronze lamps.

The old and unsightly bridge, with its hideous brick and bricked-up arches, has long been an eyesore at the Gloucester-gate entrance to Regent's Park. It was built across the Regent's-canal in 1814, and may fairly be called a specimen of canal architecture. It is described as "a brick-arched structure, 23 ft. 3 in. span, and 25 ft. in width for roadway and footways." In the year 1835 it was "widened by the addition of two footways, each 3 ft. 9 in. wide, supported by three segmental brick arches, making the width of the bridge, as at present, between parapets, 33 ft. 6 in. The bridge was built after the designs of Mr. James Morgan, to whom also the widening of the bridge was entrusted in 1835." Such is the description furnished of the structure which, for threescore years, has spanned the canal at Gloucester-gate. It was left to the vestry of St. Pancras, intent on improvement, to supersede this unsightly as well as ill-adapted roadway, and to provide a more suitable approach to the Regent's Park.

The works are progressing favourably. The foundations of the abutments are laid and brought up above the canal water-level, and about three-fourths of the superstructure are built. The adjoining north-west and south-west wing walls are nearing completion.

Six of the ten wrought-iron girders are fixed, allowing the diversion of the traffic from the old bridge to pass over the west half of the new structure, and the work of demolishing the old bridge is commenced.

Under the peculiar circumstances of the bridge being a part of the only main route from the south-west to the north of London, and the only important access to, and exit from, the Regent's Park by Gloucester-gate, it has been the aim of the engineer not to stop the passage of vehicles for a single moment, and this has been successfully accomplished by the erection and shifting of suitable temporary roadways, flooring, and hoardings.

It is expected that the bridge will be completed and thrown permanently open for traffic in the month of June next.

The Chief Surveyor to the Department of Works, Mr. Wm. Booth Scott, M.I.C.E., designed the new bridge.

ANALYSIS OF THE WATER BILLS OF THE METROPOLITAN BOARD OF WORKS.

THE Bills for which the Metropolitan Board are applying to the present session of Parliament are of an importance to the inhabitants of the metropolis which it is not easy to exaggerate. This will appear from a brief analysis of the Bills in question.

The Metropolis Waterworks (Purchase) Bill was prepared and brought in by Sir J. M'Garel-Hogg and three other members, and ordered by the House of Commons to be printed on the 18th January. It is numbered 58 in the list of the Bills of the session. It recites that water is now supplied to the metropolis by certain water companies set forth in the schedule, and that it is expedient that provision should be made for the purchase of these undertakings by "the Board"; as the Metropolitan Board of Works is styled in the Bill. It provides that the Act is to be carried out by the Board; which may delegate its power to that effect to a committee. It then enacts that within three years the companies shall sell, and the Board shall buy, their respective undertakings. Failing amicable settlement of the consideration for the purchase, the amount is to be determined by arbitration: the Board of Trade to appoint the umpire.

Any company may, by the assent of three-fifths of the votes of a special general meeting, agree to accept payment of the consideration for purchase in "Consolidated Water Stock, created under the authority of the Act."

No provision is made in case the companies do not so agree to part with their estate in exchange for a mortgage upon it. Clause 12 demands especial notice. The expression, "the amount of the consideration . . . . shall be paid or issued as Consolidated Water Stock as the case may be," is vague, as it does not mention payment in money, and it is urged that the provision enacts that if the Company does not take this stock it shall be wound up as if it were insolvent. This is described in a counter petition as "a high-handed mode of dealing with private property, which has never been suggested to Parliament till the present Bill was deposited." If such was not the intention of the framers of the measure, it is at all events the construction which the owners of the property in question have feared would be given to the clause, if passed.

Existing mortgages on any water enterprise, "shall, on and after the transfer, become debts of the Board," not taking precedence of the Consolidated Water Stock. This is a new mode of dealing with mortgage securities. Debts, accounts, actions at law, and existing officers and servants of the companies to be taken over on transfer of the property.

The Board may borrow such money as they may from time to time require for the purposes of the Act, and are empowered to create a "Consolidated Water Stock" under Loans Acts of 1869 to 1871. *Provision as to limitation of amount is expressly excepted.* Payments of expenses are to be made *before payment of mortgage* or other interest. No limit whatever is imposed, either on the money which the Board may raise, or on the rates they may levy.

The Metropolis Water Supply Bill does not appear in Messrs. Hansard's list; and as difficulty has been found in obtaining a copy, it is probable that comparatively few persons are aware of its provisions.

It recites that it is expedient that a proper supply of pure and wholesome water for the drinking and culinary requirements of the metropolis should be provided, and constantly laid on; and that for the purpose of extinguishing fire, a supply of water constantly laid on at high pressure would be of great benefit to the metropolis. Further, that it is expedient that the Metropolitan Board of Works should be authorised to construct water-works, and to supply water, according to plans deposited with the clerks of the peace for Middlesex, Surrey, Kent, Essex, and Bucks. These plans comprise six wells and pumping-stations, and three reservoirs, together with nine aqueducts, conduits, or lines of pipe.

Clause 12 is so entirely without precedent, and in opposition to the whole history and theory of compulsory purchase, that it should be read *verbatim*:—"12. The Board may discontinue and stop up any and every road, street, and footpath in or over any lands described in the deposited books of reference, and acquired by them under the powers of their Act, and thereupon all rights of way over such roads, streets, and footpaths shall be extinguished." It is inexplicable how such a clause should have been put into print, as it would give to the Board the right to divide the metropolis, or at all events the outlying districts within the circuit of their pumping-wells, into districts unable to communicate with each other except by coming into London.

The estimate of expense of the undertaking deposited in the Private Bill Office states that the expense of constructing the works will be 1,647,000*l.*, and the further expense of distributing pipes and works will be 3,800,000*l.*,—making in all 5,447,000*l.* But there is no provision in the Bill for raising funds, nor any limit as to the expenditure to which the Board may go. Nor do the plans deposited give the size of the mains intended to be laid down, or the quantity of water to be obtained from each well, which are elements essential to allow any judgment of the adequacy of the estimate.

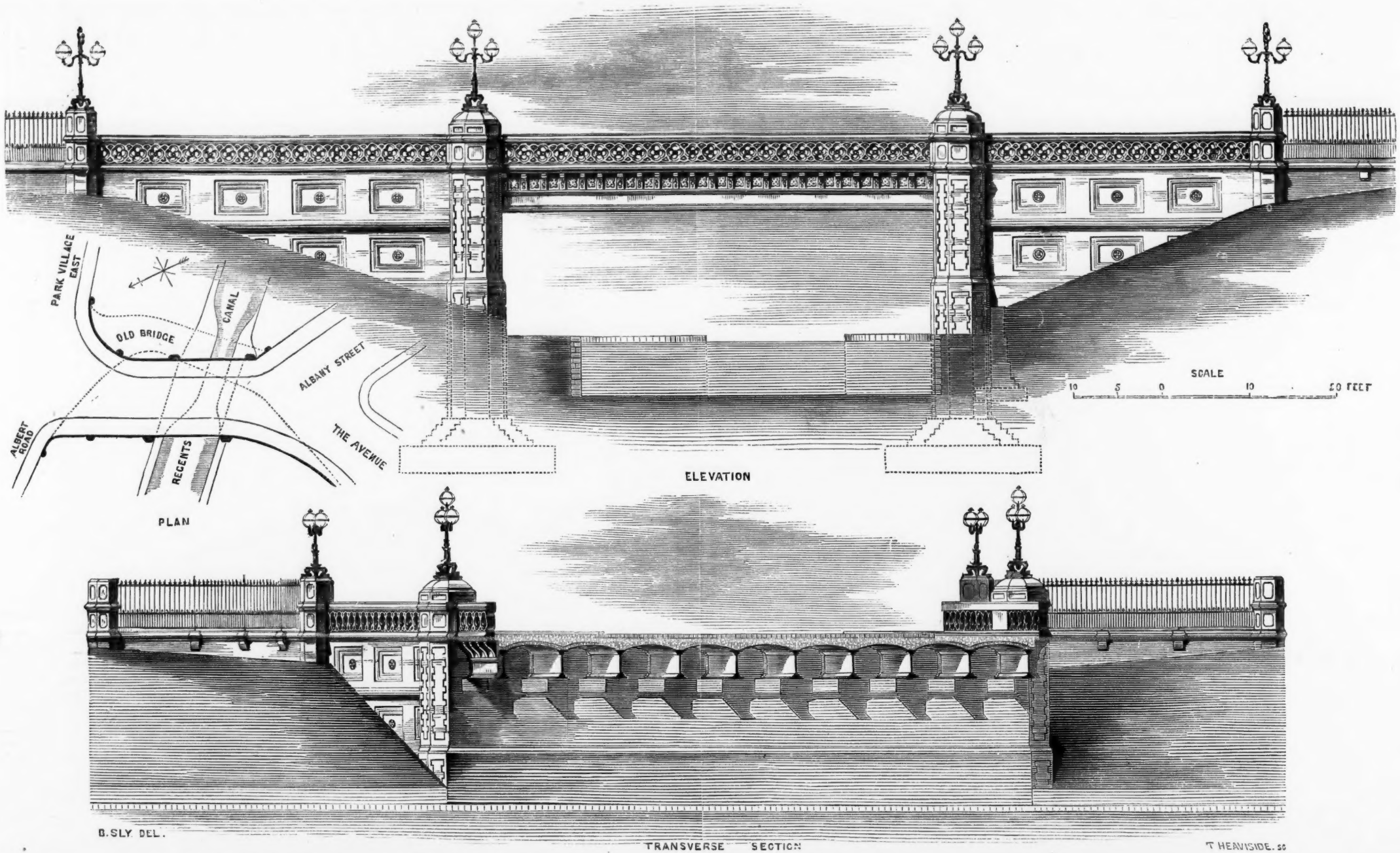
It should be noted that the Kent Waterworks Company, under letters patent dated in 1669, and a series of Acts of Parliament since the year 1809, have now power to supply a district of 120 square miles area (or more than the area under the jurisdiction of the Metropolitan Board of Works); only 29 square miles of which come within the latter division. They supply this district with water pumped from deep wells in the chalk at Deptford, Plumstead, Crayford, and Shortlands. The quality of the water is said by Dr. Frankland to be the purest possible. The quantity in the chalk is known to be limited. There are 80 miles of streets in London, supplied with mains on constant service, on which hydrants could at any moment be fixed by the Kent Company. The Metropolitan Board propose to sink two wells in the gathering grounds of the Kent Company, which would leave destitute the population which they now supply. Thus the Kent Company are now doing all that it is suggested that the best arrangements can effect, both as to quality and mode of supply of water. They are doing this 29 per cent. cheaper, taking the cost per house, than the average of the London water companies. The only certain result to the inhabitants of this large district, of the abstraction of the water, or the invasion of the Parliamentary rights of the company, would be the raising of their water-rents to at least thrice their present amount.

The Metropolis Water Supply Bill, clause 16, limits the domestic supply to be provided to dwelling-houses which are supplied with water from one of the existing water-works companies, or some other sufficient source. For the case of new houses not so supplied no provision is made.

Power is given to break up streets, to enter houses for inspection, and to inflict penalties for non-repair of pipes for water, &c., not exceeding five pounds, besides renewing and replacing at the cost of the persons fined.

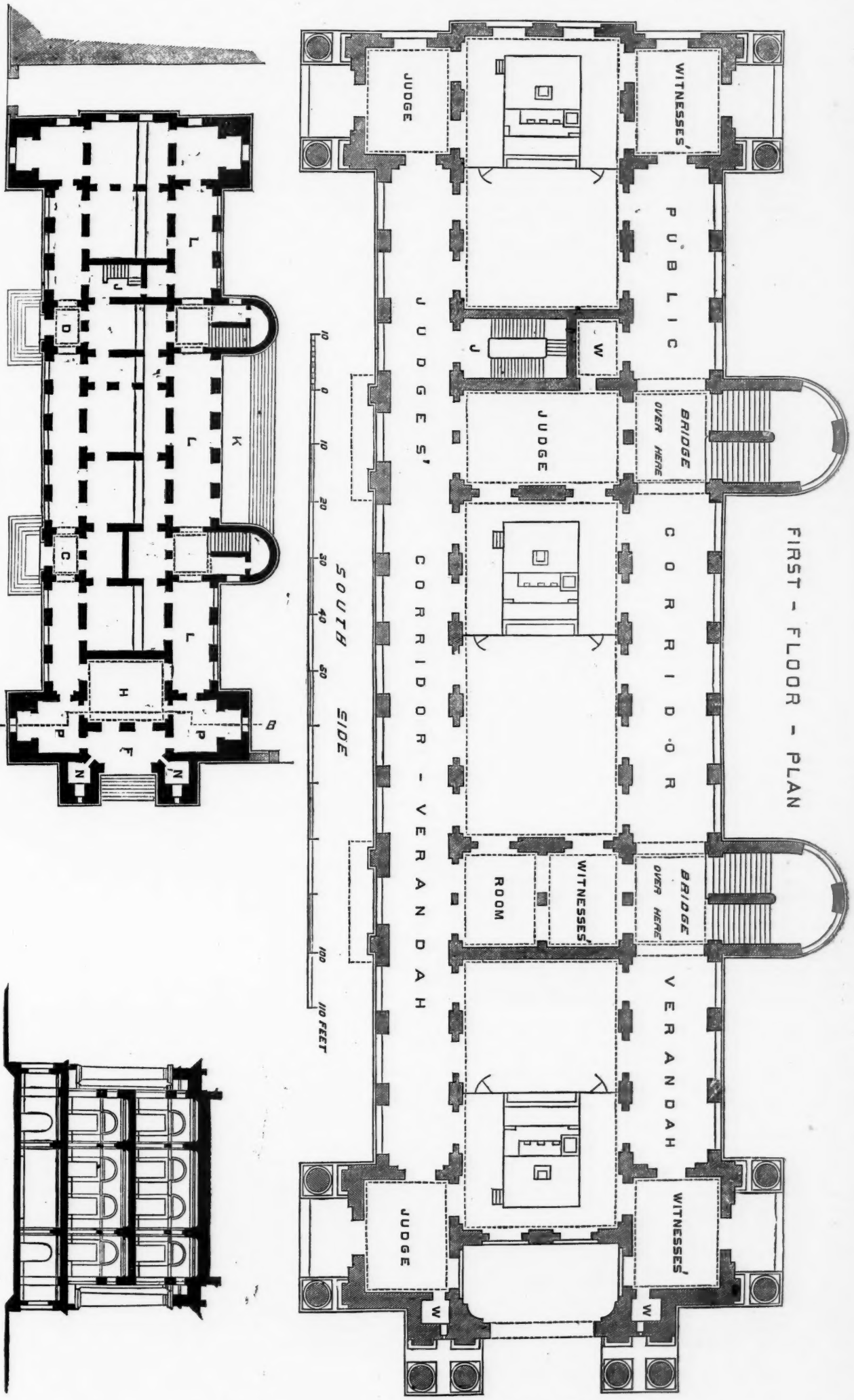
The New River Company have, since 1854, laid out about 800,000*l.*, and the East London Company about 700,000*l.*, in effecting improvements in their sources of supply. Both these companies petition against the Water Supply Bill, as applying the money of the ratepayers in order to appeal to Parliament to violate public faith. The Lord Mayor, Aldermen, and Commons of London, in Common Council, have petitioned Parliament against the Metropolis Water-works Purchase Bill, which they maintain to be financially most objectionable, as enabling the Metropolitan Board to increase, *ad libitum*, their already large and rapidly-swelling debt.

We may add that while the jurisdiction of the Metropolitan Board of Works now covers an area of 117½ square miles, the area comprised within the Parliamentary districts of the old water companies, which the Board attempts to replace, cover an extent of 533 square miles, and extends to the north as much as 23 miles, as the crow flies, from London Bridge.



NEW BRIDGE OVER THE REGENT'S CANAL, AT GLOUCESTER GATE, REGENT'S PARK.——MR. WILLIAM BOOTH SCOTT, ENGINEER.

THE COURT OF SMALL CAUSES, CALCUTTA.—MR. WILLIAM H. WHITE, ARCHITECT.



THE COURT OF SMALL CAUSES, CALCUTTA.—*(The small Plan and Section are drawn to a scale half that of the First Floor Plan.)*

THE COURT OF SMALL CAUSES, CALCUTTA.

THOSE who have never visited Calcutta or Bombay have probably but an imperfect idea of the size and importance of many public buildings erected during the last ten or fifteen years in the Washington and New York of our Indian Empire. Nor is it likely that professional men, who carry on an easy practice at home, would expect a high conception of architectural art from an official administration of Public Works in which the military element largely participates. Nevertheless, to have witnessed the difficulties under which the Indian engineer-architect labours,—difficulties which are greater and more numerous in Calcutta than in Bombay,—is to admit the injustice of any attempt, even, to compare the construction of buildings in either city with similar works in England or on the continent of Europe. Some time ago, in an article on the College of Indian Engineers at Cooper's Hill,* we freely admitted and defined some of these difficulties. We pointed out that the Indian system of government—which, as a rule, comprises the direction of all works of architecture and engineering,—favours a constant and ever-changing supply of steady well-to-do mediocrity. That, indeed, is an often-accepted peculiarity of the departmental system. The officers of Indian Public Works are, roundly speaking, their own architects for the design of a new building and their own builders for the execution of it; their own engineers to calculate the weight and resistance of materials, and their own surveyors to measure and value them. In India there are no libraries in which to study architecture, and no European precedents of any original value to guide an architect. Nor are there any native precedents to inspire him in the Capital itself. Furthermore, in Calcutta there are no building materials at his service more valuable or artistic than ordinary bricks and ordinary cement, while the sands upon which buildings, often enormous and of great weight, must rest are as treacherous as is the soil of a large part of Holland. Indeed, considering the slight means at the disposal of the Calcutta administration and the often ambitious character of the ends accomplished or proposed, the outsider who sees what is already done, and knows how it has been done, is likely to be astonished less at the palpable failures of construction that have occurred than at the many serviceable buildings which have lately risen under the auspices of Government servants.

The building, plans and a view of which we publish to-day, is a Calcutta Court of Justice, consisting of six courts, in five of which judges preside, and of public offices connected therewith. Erected in the years 1873-4, it was begun at the close of 1872, from the designs and working drawings of Mr. William H. White; and for the first few months it was executed under the immediate superintendence of Mr. Hugh Leonard, who is known as the father of Indian engineering, and who was then officiating Chief Engineer and Secretary to the Government of Bengal. The walls and even the columns are of brick, covered with a coat of cement; and though the exterior is thoroughly European in character, the arrangement of the courts and verandahs is Anglo-Indian, and, to some extent, peculiar to Calcutta. As may be seen from the plan, the building is completely isolated, and stands at the junction of two streets. The south façade fronts Hare-street, which runs from Dalhousie-square to the Strand or river-side; the east façade fronts Bankshall-street, which runs at right angles to Hare-street. In Calcutta, unlike many other Indian cities and other parts of India, buildings must be placed with regard to aspect north and south; for during the hot season a refreshing breeze is carried from the south over the course of the Hooghly into the verandahs of the white parched city,—a breeze, by the bye, which "refreshes" only in the early morning and after the sun has set. Rooms opening into a south verandah are therefore the most healthy and agreeable; and the rooms in well-built houses are so arranged with doorways that a through current of air can be maintained from south to north. In other words, no matter how many rooms may be placed side by side,—two or three, as the case may be,—a free communication ought to exist between the south verandah and the north verandah of a house or public building. The problem, therefore, is to obtain the largest amount of external air with the least external heat; and, as light is heat, rooms in Calcutta are always sombre,—a ray of direct sunlight being not only disagreeable, but positively dangerous. Not only is it necessary to defend a window with a verandah, but every window opening has a kind of *persienne* or "venetian" made in casement fashion, and kept closed during the entire day. To all the window openings there are also glazed casements; and while the casement windows open inwards, the casement "venetians" open outwards. The windows, however, are rarely closed; that is to say, only when, during the hot season, a "north-wester" springs up, or at intervals during the heavy rains which fall from June to the end of October. A reference to our plan of the first story, containing the three principal courts, will serve to show how a free communication of air is encouraged from south to north; moreover, a similar communication has been rendered possible from east to west by openings left in the circular heads of doors and windows, and in the walls through the witnesses' and judges' retiring-rooms from court to court (see Section A B). The external arches of the the corridor verandahs are always open to the air; only the upper portion is fitted with a fixed *persienne* or "venetian," and this descends to within about 8 ft. of the verandah floor. The openings between the verandahs and the courts are glazed with French casements, and provided with the casement "venetians" or *persiennes*, to which we have alluded. During the greater part of the year the courts sit with the windows entirely thrown back, and the *persiennes* entirely closed; while in the hot season punkahs are swayed by invisible agency backwards and forwards alike in court or church, public office, or private dwelling. In the building we are describing each court has a judge's room and a room for witnesses; but no lavatories or closets, usually attached to such rooms in Europe, were provided in the original design. Such an innovation was attempted in the new High Court of Judicature and in other new buildings, but the older and probably more efficacious custom is still thought preferable, even though Calcutta is now endowed with sewers and a system of drainage. In this instance the closets, marked W on the plan, were intended for the ordinary commode, which a low-caste native servant is employed to remove when summoned; while the judges' retiring-rooms, which possessed no closet of the kind, were to be provided with small inclosures fixed between the columns outside the windows,—a method not only frequent but usual in the public and private buildings of Calcutta. Similar plans for public accommodation are provided in the "compound" (external yard) through which the ordinary public pass in order to reach the principal entrance at K, shown on the ground-floor plan. Passing thence into the corridor-verandah L L L, the public ascend to the courts,—three on each story,—by the apsidal staircases. The height from floor to floor of 25 ft. is scaled by fifty steps. The stairs are divided midway by a landing which, with a view of economising space, forms a bridge over the corridor. Another entrance, F, leads into a small hall, H, intended for the clients of pleaders,—a lower grade of advocate practising in the Court of Small Causes,—whose rooms are at P P. N N are porters' lodges. The hall, H, also serves as a communication between the public and private parts of the building,—the south corridor-verandahs being specially reserved for the judges, whose private entrance is at D, and whose private stairs are at J. The other entrance at C is for the exclusive use of clerks and other officials engaged in the business connected with the courts, or transacted across the counter in the offices on the ground story.

It was originally intended to erect porticos over the entrances C and D,—porticos which would have covered the steps and the pavement; it was also intended to arrange a portico for carriages in front of the broad flight of steps at K. But the Government of Bengal would have no porches or porticos. The then Lieut.-Governor, Sir George Campbell, was pleased to order the lopping off of all such expensive excrescences; yet few knew better than he that no European, while the sun is high, can stand unshaded on the pavement of a Calcutta street without risk even during the winter months. A reference was made to this fact in a paper* read before the Institute of Architects exactly four years ago. It was there stated that a want painfully experienced in Calcutta was a covered footway. Many Indian engineers admit that foot passengers, and others descending from carriages into shops and offices, ought to be protected by a covering similar to that of the Rue de Rivoli in Paris or the old Quadrant in London. "It may seem extraordinary," said the author of the paper, "to advocate such a thing for an Eastern metropolis, but it is still more extraordinary to find that nothing of the sort exists in the European quarter of any Indian city." It would seem, therefore, that under British rule a *quasi*-absolute Government like that of Bengal can no more initiate an improvement or start a necessary innovation than can constitutional government at home. It must, however, be admitted that Bombay, thanks to Sir Bartle Frere, did expropriate and improve itself. It was done, however, by enduring the strongest opposition and even reprobation from the supreme Government at Calcutta. Besides which Bombay now possesses public buildings of a character vastly superior to any that Calcutta, with all its "palatial" traditions, can equal, at least as far as the quality of their execution is concerned. This is due to two reasons; the first and chief reason being that excellent materials, similar to those used in Europe, are easily obtained; and, secondly, that the Bombay Department of Public Works has known how to employ, and to keep, officers educated and trained in England for the practice of civil architecture.

In Bengal the Government are less fortunate. There the Department of Public Works is presided over by a Chief Engineer, generally a military man. Under him are Superintending Engineers, who each control what is called a Circle. The Circles are cut up into Divisions; over each is an Executive Engineer. Under each Executive Engineer is an Assistant Engineer, and then come European Sub-Engineers, foremen, and others, who control the general mass of native workmen. To explain how buildings are, or perhaps were, erected in Calcutta, we quote another passage from the paper on "Government Architecture in Bengal" in which the building we have illustrated is mentioned. "During the thirteen months I was in the service of the Government," said Mr. White, "two large public buildings were commenced. The plans, sections, and elevations of one of them, with an approximate estimate, having been approved by the Lieut.-Governor, were sent by the Superintending Engineer of the Presidency Circle to an Executive Engineer, with orders to prepare an official estimate, and to commence the works without delay; at the same time he was cautioned as to the precarious nature of the soil and ordered to make plans and sections of the necessary foundations, the footings of which were to be calculated, as regards width and depth, according to the weight of wall they were intended to carry. The plans and sections of those foundations, with a careful estimate of their cost, were, in due time, sent to the Superintending Engineer, approved by the Chief, and returned to the Executive Engineer, with orders to begin. Those foundations were barely completed before a change was necessitated by unexpected circumstances. The Executive Engineer, who had given a great deal of conscientious labour to the study of them, and who was responsible for them, was suddenly despatched to the charge of a division distant 1,000 miles from Calcutta; another was appointed to the post thus vacated, and the works proceeded. Now it is clear that if those foundations fail, the original Executive Engineer cannot be called to account, because his mantle of responsibility was transferred to the shoulders of the colleague who superseded him; while each of the Executive Engineers who have continued the works can plead, in the event of the failure of any portion of them, that it is due to the foundations which their original predecessor executed. Another illustration of the difficulty," continued the narrator, "of defining responsibility is to be found in the New Imperial Museum of Calcutta, the original design for which was made by the late Mr. Granville. Some of the floors of that building were designed to be arched and the passages vaulted. Soon after the works were commenced, an order was issued to substitute iron girders in their place; and walls designed to receive continuous brick arches were weighted at intervals with enormous wrought-iron girders. The obvious consequences followed, and the building is ruptured in many places; while the public, with little means of learning the truth, believe that the

* See *Builder*, vol. xxxiv., p. 729.

* "Government Architecture in Bengal": see the Transactions R.I.B.A., March 23, 1874.

failure is due to the incompetency of the architect, who, if I am not mistaken, never saw the building after it emerged from the ground."

Such a system of manufacture often results, and very naturally results, in the construction of quite a different "compo" front to that which the original architect designed. In the case of this building, our illustration of which is taken from a photograph, the general exterior is pretty much as the designs showed it; but refinement or even accuracy of mouldings in the cornices and strings, the necessary entasis to the columns, are conspicuously absent. The balusters, rusticatations, and the arch-reveals, are by no means orthodox adaptations from the antique, or even the French architecture of the last century. The capitals of the columns, as executed, are singular examples of ingenuity, and, most likely, native ingenuity. In the original drawings, some of which were to a scale of half an inch to the foot, those capitals were shown in elevation, but not in plan. Though a perspective view of the building was made, the native workmen had undoubtedly no opportunity of seeing it. Instead of the ordinary French and English variation of the Ionic capital,—with four volutes set crosswise upon the circular shaft, the joint being concealed by a moulded necking, and a garland of leaves being suspended from volute to volute,—the native modeller has interpreted the geometrical drawing line for line; he has produced, instead of volutes, four things which seem to be a combination of serpent and dolphin, snake and fish, swathed in a bandage which encircles the capital. This, by the bye, is not an isolated instance of native attempts to produce an Ionic capital from a drawing. We remember having seen a colonnade at a house about a hundred miles from Calcutta, in which a similar misapplication occurred. Thus "the whirligig of Time" continues its revenges; the volute which has come to England through long centuries of appropriation and development by various peoples, is taken back by the English to Asia, only to be received by the Asiatic as an enigma or a snare. We, however, have presumed to show the columns and their capitals as they were intended to be, and not as they unfortunately are.

MODERN COSTUME IN DECORATION.

SIR,—Mr. Charles Reade, in his recent suggestive articles on the "Coming Man," shows that the spirit of nature revolts from the trammels of fashion, and that the Chinese female children persistently kick against custom and refuse to come into the world with fashionable feet. They little know to what pains and penalties this steadfast adherence to nature's ideal foot will commit them. Now, all fashions that interfere with nature's most perfect, beautiful, or ideal presentations, are akin to that Chinese perversity which dwarfs the feet of their children. The healthy and cultivated intellect instinctively revolts from all that is arbitrary and ephemeral in taste. Cruikshank, several years since, pointed out, either in pamphlet or in letter, the inconsistency of ghost-seers, who associate with the visions of their friends the disembodied spirits of silk dresses, lace cuffs and collars, and 17s. 6d. pantaloons, as they generally describe the spirits of their friends as putting in an appearance costumed as mortal bodies are wont to be in this sublunary sphere. This, when clearly stated, appears to be monstrously ridiculous. But why? Because our higher feeling and taste revolt from anything but the abstractedly beautiful being associated with the future state. Would any one tolerate a 'galaxy of angels painted in modern costume? This question goes to the very root of the matter under discussion, as it clearly indicates that our higher intellectual nature exalts the abstract, the ideal, and sets it far above the shifting conventions of fashion.

Mr. Buckman demands that our modern fashions, the offspring of the "nature" of tailors and dressmakers, should participate in the immortality of the productions of that higher nature, which is eternal,—in the immortality of the abstract, the ideal. Should the fashions or the everlasting nature of the mind and of the body be the chief concern of art? Mr. Buckman makes much ado about nothing. These clothes about which he torments himself so much are quite insignificant matters; their fashion may change to-morrow; they are but the trappings and the suits of folly, which are not worth handing down to the ragshop of posterity, wherein they would be very quaint and worthless old clothes indeed, answering no purpose whatever but that of satisfying an unprofitable curiosity.

The matter may be brought to a very simple issue. There are many modern athletic games which were also in vogue in ancient times: would the majority of painters and of cultivated persons prefer to see them portrayed in ancient or in modern costume? There are great subjects, too, which might, in so far as the telling of the story, be presented in modern instead of an abstract costume, or in that "everlasting" drapery, as Addison aptly terms it, using that term as a term of praise. But which of these modes would æsthetically be the preferable, the more accordant with that eternal nature which it is the highest object of art to study and to depict? When to use and when to avoid modern costume in art must be left, as it has been, to the discretion of the artist. It is clear, however, that the higher teaching of nature is that it should be avoided whenever it can possibly be avoided without being ridiculous.

The Assyrians, the Egyptians, and the Greeks were not, after all, so literal in their art presentations as Mr. Buckman would have us believe, for, according to his own showing, they made certain princely personages and heroes greater in stature than the *canaille*. Did they desire to mistrust or to mislead posterity by so doing? Does Mr. Buckman believe that the Elgin frieze is a literal and not an artistic representation of the procession in honour of Minerva. If he does, let him read an account of the social life of the Greeks, and how they were costumed in every-day life. In this frieze, too, there is an exaggeration of size in some of the figures, and the whole is kept strictly within the limits of architectonic treatment. If the ancients were capable of making those departures from the literal facts which Mr. Buckman admits, and which were their rude way of expressing the ideal, they were also capable of making other departures from fact to serve the purposes of art, and these it could be easily proved they did make.

It is not considered good form to enlist the dicta of the Scriptures in support of an argument upon any general topic, but it may not be altogether out of place to note that they are most emphatically against individualism or literalness in art. The command against graven images is that these shall not be made in the *likeness* of anything in the heavens above, in the earth beneath, or in the waters under the earth. This edict is manifestly aimed at individuality in art, against art in the *likeness* of any person or creature, and not against representations of the ideal or the abstract; for we know that sculptured golden cherubim were not only permitted, but were commanded to be placed over the Mercy Seat. This is final as regards the exalted nature of the ideal and the duty of rejecting the literal.

METER.

THE DOLMENS OF FRANCE.

SIR,—In 1872 I saw at Saumur what is stated to be the largest and best preserved dolmen in France, being a chamber composed of huge blocks of unhewn stone set upright to form the walls, with others laid across them for a roof, in the manner of a house of cards. This relic is 64 ft. in length, and it consists of fourteen stones, four of which are on each of the sides and on the roof; one is at the west end, now closed; one at the east end, now overturned, being a threshold to the entrance. The largest of the blocks measures 24 ft. by 21 ft., and it is 2½ ft. in thickness at least. I saw, also, on a hill near Saumur, a dolmen, similar to Kit's Cotty House, in Kent, composed of six large stones. It is stated in Murray's "Handbook to France," p. 236, that at Poitiers, about 1½ mile out of the town, a little to the left of the road to Limoges, on a height, is a dolmen, known as *La Pierre Levée*. This relic is a block of calcareous sandstone, about 13 ft. long, and 3 ft. thick, which rests at one end on upright stones. Near Le Mans, at Connerre, in the hamlet of Duncan, I saw a large oblong dolmen, near the road, similar to Kit's Cotty House, and well preserved, it being composed of several large stones.

At St. Nazaire, near the railway station, I saw a large dolmen,—one large stone resting upon four supporters. At ten miles north-west of Brest I saw the menhir of Plouarzel, 35 ft. in height, mentioned in Mr. C. Weld's Brittany. The female peasants repair here praying for the boon of fertility. A similar custom is stated to prevail in Egypt with reference to the ancient obelisks.

Near Dol, I saw the pillar La Pierre du Champ Dolant, about 30 ft. high, also mentioned by Mr. Weld as a menhir. The "Guide-book" and some tourists state that from Rennes," at Essé, a stupendous dolmen, or *allée couverte*, can be visited in a day." I travelled by *diligence* to Janzy from Rennes, and thence I walked to Essé, about three miles eastward, and returned to Rennes in the evening. I found the dolmen on the left side of the road which leads from Essé, on the right as I entered the village, about two miles distant.

That valuable work, the "Archæologia Cambrensis," 4th series, vol. v., p. 323, contains an engraving of the menhir of Kerloaz, and another engraving of the menhir near Dol. As to the former, the writer, Mr. E. L. Barnwell, states that "on each side of it, about 3 ft. from the ground, is a round boss about 1 ft. in diameter. Against these, in the case of a newly-married couple, the man on one side, and the woman on the other, rub their chests, the man that he may be the father of boys only, and the woman that she may be the master of her husband and his house." In my note upon "Brittany Stone Monuments," in the *Builder*, No. 1811, pp. 1231-2, I omitted to mention these relics, and the prostrate menhir at Locmariaker, called Men Brao Sao, "the uplifted stone of the brave one." Kergloas means "the place of mourning." At p. 326 of this volume there is an engraving of the Saumur dolmen, described as 64 ft. long, consisting of fourteen stones. Each side formed of three, and the roof of four stones, one stone at the west end, that at the east end being prostrate. A road seems to have divided this dolmen, so that its original length cannot be ascertained. The largest of the fourteen stones is described by Mr. Barnwell as being 24 ft. by 21 ft., and nearly 4 ft. in thickness. At p. 237 the Essé dolmen is engraved, being "under two miles from the small town of Retier, and on a farm to the right of the main road to Rennes." Two engravings and a plan are given. No. 1 shows the dolmen generally, and No. 2 the enormous lintel stone, 17 ft. long, supported by two massive stone pillars. This dolmen includes five large cap-stones. The breadth of the interior is 13 ft. The stone at the west end is also 17 ft. long.

According to the plan the length of the dolmen is 64 ft., and it includes thirty-two stones altogether, besides the capstones, viz., on the south side, the high supporter of the lintel, two side stones, a cross stone, two side stones, a cross stone, one side stone, a cross stone, one side stone, then a vacancy of several feet and another side stone. Then a cross stone, two side stones, a vacancy of 2 ft., and two side stones, complete the south side. On the north side, commencing also at the east end, is the lintel support, then a side stone, and after a vacancy of 3 ft. a side stone. Then a cross stone, and a fallen stone. Ten side stones of various sizes, with the long west stone, complete this dolmen, which merits accurate inspection. There are no remains of any tumulus. It appears probable that the Saumur dolmen resembled this one originally, having four divisions. The cross stones at Essé appear to have been from 5 ft. to 6 ft. in length. Of the five remaining only two of them are opposite. An accurate plan, and a photograph of this relic, and of that at Saumur, would be useful and interesting. But the engravings in this volume are admirable; and as to the Saumur and Essé dolmens, I believe them to be the only views extant.

C. C.

The Fall at Woolwich.—The fall of the Commissariat store-houses at the old dockyard, Woolwich, having been quietly inquired into and discussed, it has been decided that the interests of the service render it inexpedient under present circumstances to enter into a controversy and possible litigation with the contractor. It is therefore understood that the loss will be borne by the Government, but it will not be so heavy as was at first imagined. Much of the timber can be used again, and already most of the uprights and some of the gables are in position. A great many additional workmen have been set on, and every effort is being made to finish the building within the contract time. The accident has not had, so far, any fatal results. There ought to be a public inquiry into the cause of the accident.

AMERICAN RAILWAY APPLIANCES.

THE INSTITUTION OF CIVIL ENGINEERS.

ON Tuesday, the 12th inst., Mr. Bateman, president, in the chair, the paper read was "On Railway Appliances at the Philadelphia Exhibition of 1876," by Mr. Douglas Galton, C.B.

Although the first American railroad was only constructed in the year 1830, about 22,000 miles were in operation in 1856, and 74,600 miles in 1875. The difference between the American and the European railroad systems was very marked. In Europe the railway was originally looked upon rather as a means of diminishing distance by high speeds than as the universal road for traffic. In America, where the railway had been the pioneer road of the country, and the sole means of communication, circumstances prevented the investment of more capital than was sufficient to make a line adequate to perform the duty immediately required of it. But, whilst the first cost was thus limited, considerable expense had to be subsequently incurred in perfecting the line. On the early American railroads the sleepers were laid on the soil, with little or no ballast. Sharp curves and steep gradients were the rule, so that a short rigid wheel base was imperative. Again, a car resembling the saloon of a steamboat was adopted, rather than a development of the body of a stage-coach, as on European railways. The cars had central couplings, with end doors and steps, so that station platforms were unnecessary: and the traffic, until recently, had not demanded expensive signal arrangements. More responsibility appeared to have been thrown on the engine-driver, and improvement had been mainly in train appliances, such as brakes. It was believed that whilst the railways in Australia and other British Colonies and in India were still in their infancy, advantage would accrue from a careful consideration of the American system.

The subject was treated under the following heads:—1. Permanent Way; 2, Cars and Car Fittings, including (*a*) wheels, (*b*) axles, (*c*) couplings, (*d*) springs, (*e*) brakes, and (*f*) heating apparatus; 3, Locomotive Engines; 4, Railroads of 3-ft. gauge.

The great distances on American lines had led to the conversion of the passenger-cars into travelling hotels. The main advantage of the American form of car, which consisted of a long body supported at each end on a bogie truck, was the power of movement afforded to the passengers, and of access to conveniences. The disadvantages were, the mode of opening the windows, which slid up instead of being let down into the panels, and the difficulty of ventilation, but the latter had been overcome by a central raised roof, with clearstory windows. A car for sixty persons had a length of body of 48 ft., a width of 9 ft. 6 in., and a height of 7 ft. 10 in. at the sides, and of 10 ft. 3 in. in the centre. Such a car would weigh, when empty, 650 lb., and when full 783 lb., per passenger. Sleeping-cars for sixty-four persons were made with a body 61 ft. long, and weighed, when empty, 812½ lb., and when full 945½ lb., per passenger. A class of vehicle, recently adopted, seemed likely to come into greater use. This was the refrigerator car, by which the produce of California was brought to the Eastern States, and the delicate fruits of the South and fish from the Gulf of Mexico were taken to Chicago. These cars were fitted with ice boxes, and were of various patterns. A very efficient cooling surface was provided by two ice-chambers on each side of the car, or four in all, extending from the top to the bottom, and fed through hoppers in the roof. These boxes, being placed 3 in. from the sides, allowed a free circulation of air all round.

The use of chilled cast-iron wheels was all but universal on American railroads. Each wheel formed a single casting with the tire, and was cast in a chill, consisting of a rim of iron turned perfectly true, so that labour in turning was avoided. The necessary hardness in the chill was obtained by a mixture of charcoal iron, chiefly Salisbury iron, with broken-up wheels and castings. The comparatively high price of charcoal iron had led to the substitution for it, in part, of anthracite iron, with wrought iron or Bessemer steel.

Three axles were noticed, in each of which the object was to allow the wheels attached to them to revolve independently. The construction of the Miltimore axle—one of this class—was described in detail, as with it there was a marked diminution of friction in passing round sharp curves. The results of two experiments were recorded, which showed in one case that there was a friction of 13·15 lb. per ton in the Miltimore axle, as against 17·21 lb. per ton with an ordinary axle, while in the other case these figures were 13·67 lb. and 26·55 lb.

The Miller coupling and buffer, now generally adopted in the United States for passenger-cars, consisted of a spring buffer with a coupling immediately under the centre of the buffer. The brakes on American railroads were, as a rule, capable of being applied to a larger number of wheels in a train than in this country.

The method formerly in use in America for heating the cars was by open iron stoves, but these had been the cause of many frightful accidents from fires. The Baker Car-warmer seemed now to be in great favour. In this the heat was applied by hot-water pipes laid round the car on the floor-level, the water being heated by a coiled portion of the pipe being passed through a circular iron stove. The fire-box of this stove was of wrought iron, and this again was contained in a second covering of iron, which terminated in the chimney. No instance was on record of a fire having been occasioned in a train from these stoves. For the circulation, both ends of the pipe were inserted in a close cylindrical cistern on the roof of the car. The liquid used was a saturated solution of salt-water, as this solution did not freeze at ordinary low temperatures. The safety-valve had a compressible india-rubber ball, as the crystals of salt prevented a metal-seated valve from shutting tightly. The average allowance of heating surface in an ordinary car was 11 ft. of 1¼-in. pipe per passenger.

The striking fact gathered from the exhibition of railroad cars at Philadelphia was that, while the comfort of railway travelling had been practically stationary in Europe for the last twenty-five years, it had been rapidly developed in the United States within the last few years to a standard above that of Europe. The comforts were as much needed in Europe. The distances were as great; the cold was as intense; the populations to be accommodated were as numerous, and more wealthy. No doubt, the control exercised by Continental Governments had had some effect in stopping improvements; but the author believed the stagnation was largely due to the use of small carriages divided into compartments. These had actually prevented the development of comfort, while the larger American car had both suggested and afforded scope for improvement. Until European railway companies followed the lead of America, and adopted long carriages on bogie trucks, comfort in travelling would remain in its present unsatisfactory condition.

Within the last few years companies had been formed to build in America 8,000 miles of narrow-gauge lines, of which 2,700 miles were in operation at the beginning of 1877. The Denver and Rio Grande railroad was proposed to be 1,700 miles long, and between 200 and 300 miles had been completed. The promoters of this system contended that a mile of single line having a gauge of 3 ft. could be made for 1,904*l.*, with rails weighing 30 lb. to the yard, or for 2,144*l.*, with rails of 40 lb. to the yard, while the rolling stock might cost 758*l.* per mile, calculated for a length of 100 miles of road.

Dorchester New Bank.—Messrs. Eliot, Pearce, & Eliot's new banking premises are now complete, and form a feature in the fine old main thoroughfare of Dorset's county town. They are in the Italian Renaissance style of architecture, built of Bath and Portland stone; the main façade abuts the street. The lower story displays much ornamental masonry, and immediately above a carved cornice runs from east to west. This is stopped at either end by corbels. The floor above has much carving about its windows, and all is surmounted by the main cornice. It is carried by a number of carved cantilevers, and its various members are enriched by egg and tongue, leaf and dart, bead and roll, and other continuous ornaments. The carved work has been executed, from full-sized drawings prepared by the architect, by Mr. Harry Hems. The banking-room is of good proportions, and the bank parlour, strong-room, and other accessories satisfactory. The manager's apartments are contiguous with the rest of the building. The contract has been carried out by Mr. G. J. G. Gregory, builder, of Dorchester; Mr. G. R. Crickmay being the architect.

METROPOLIS MANAGEMENT AND BUILDING ACTS AMENDMENT BILL.

THE Select Committee of the House of Commons appointed to consider and settle the clauses of this Bill, met for the first time on the 14th inst. Mr. Philbrick, Q.C., explained the provisions of the Bill at considerable length, and several witnesses were afterwards examined. We can refer only to a few of them.

Dr. J. W. Tripe said he was medical officer for the Hackney district. He had latterly closely watched the construction of houses in the district. The foundations of many of the smaller houses were very bad. In one district of ten acres in extent the houses had been built entirely on raised ground. In 1876 there were 1,662 residing on the estate, and in 1877 2,031. In 1876, the death-rate was 28·3 per thousand, excluding small-pox. Including small-pox it was 37·3, while the death-rate of the whole of Hackney was only 18·5, including small-pox. In 1877 the death-rate was 32·9, including small-pox, while the death-rate for the whole of Hackney was only 19·7. He did not attribute the whole of the increase to the unhealthiness of the site, but he had no doubt that it had largely contributed to the increase. The practice was to excavate and sell the sand and gravel; then to be paid for the privilege of shooting rubbish upon the excavated land, and then when the soil had been sufficiently raised by this means to build upon it. At present it was the custom to build houses in London of green wood and wretched mortar. He produced a sample of mortar taken from a house which had fallen down, and another of so-called sand, but he said it was impossible to detect any sand in it.

Dr. John Whitmore, of Wimpole-street, medical officer of health for the parish of Marylebone, said he had made infectious diseases a special study. He had been struck by the fact that in certain districts epidemics were constantly occurring. Upon inquiry he found that the houses in which these frequent outbreaks of fever occurred had been built to a considerable depth on animal refuse, and filth and rubbish of every description. He had come to the conclusion that the diseases of a zymotic character which arose in his own and other localities were attributable to the unwholesome character of the foundations upon which the houses were built.

Mr. J. D. Mathews, district surveyor of Stoke Newington district, said there were sixty-two district surveyors. They were all appointed by the Metropolitan Board, and were required to hold certificates from the Institute of British Architects. He had considered the propositions contained in the present Bill, and entirely approved of them. In his district there was a superior description of sand at a depth of 20 ft. or 30 ft. It was a constant practice to get out the sand for the purpose of sale. It was carted away from the place where it ought to be used and an inferior material brought in. In fact, it was found more profitable to sell the sand. As regarded mortar, the builders were not sparing of lime, but instead of sand they used garden mould, upon which the lime would not act. In point of fact, the mortar was nothing more than solid whitewash that would not bind. It was most important that the Metropolitan Board should have power to make bye-laws for the regulation of building operations. Of course it would be necessary to exercise the powers.

At the meeting of the Committee on the 15th, Mr. W. R. Selway was examined at considerable length. He stated that he had been a member of the Metropolitan Board since January, 1873, and was a member of the Building Act Committee. The functions of the Building Act Committee were to consider applications in respect to lines of frontage, laying down of new roads, and other matters relating to building operations. The clauses of the Bill which had reference to theatres and music-halls had been inserted in compliance with the recommendations of Sir H. Selwin-Ibbetson's Committee, which reported last year, after taking a large amount of evidence in regard to theatres. The Board asked for power to remedy any structural defects in the existing theatres that could be remedied at a moderate cost. In the event of the lessees being of opinion that the order was unreasonable, power was given to appeal against the decision of the Building Committee. The attention of the Board had been repeatedly called to the unhealthy nature of the sites that were now built upon in the metropolis. Deputations and memorials had been received

from Hackney, Woolwich, Camberwell, Battersea, and other places, calling upon the Board to take steps in the matter. Very recently he went down with the district surveyor to Peckham, and there he saw an extensive estate which had been built over a "slop shoot." The sand and gravel had been excavated to a depth of 30 ft., the space was filled in with road scrapings, filth, and garbage of every description, and dwelling-houses were being rapidly built over it. To give an idea of the nature of the soil, witness stated that in one of the back-yards he found some men levelling the soil for a garden. On examining the material he found it almost entirely composed of decaying animal and vegetable matter. There ought to have been a bed of concrete over the whole. There was a bed of concrete under the walls. The district surveyor had no compulsory powers, but he had persuaded the builder to do this in order to keep down the exhalations which would immediately arise on fires being lighted in the rooms.

By Mr. Round, who represented the Mercers' Company.—Was chairman of the Building Committee when the Bill was prepared. It was prepared last year, but at too late a period for introduction last session. It made provision that the bye-laws framed by the Metropolitan Board should receive the sanction and approval of the Secretary of State.

Mr. Philbrick pointed out that in the petition of the Mercers' Company no objection was raised to the bye-laws.

Mr. Round remarked that the Bill as at present drawn would affect the interests of the Mercers' Company to the extent of 100,000*l*.

Mr. Edward M. Barry, R.A., said:—During his professional career he had devoted attention to the improvement of London, and had carefully studied the Local Government Acts. He gave evidence on the Bill of 1874. He had read the present Bill, and was of opinion that the provisions it contained were very desirable in the public interest, and would remedy the evils complained of. The sooner legislation took place the better. The first part of the Bill dealt with the question of highways and the width of streets in the metropolis. Streets intended for carriage traffic should not be less than 40 ft. wide, and for foot traffic not less than 20 ft. wide. He understood that some difficulty had arisen with regard to the operation of the existing Acts in this respect, but he did not think any landowner would suffer injury by the enforcement. He had devoted much attention to the question of theatres and music-halls. As regarded the means of ingress and egress in times of panic from fire, each case must be judged upon its merits, but he had no doubt that in most of the theatres substantial improvements might be effected at a moderate cost. The proprietor was the person who ought to defray the cost. He was bound to make provision for the public safety, and if he refused he ought to be made to do so. As to the question of jurisdiction, the Metropolitan Board was a proper body to exercise the powers of supervision conferred by the Bill, and to control the structural arrangements of all new theatres. For sanitary reasons, and for securing stability of structure, the Board ought to have the powers they asked for in regard to general building operations. In many cases it was absolutely essential that the foundation should be covered with a bed of concrete before it was built upon. Even in the case of the National Gallery the remains of an old pit were discovered, and if the pit had not been covered with concrete the most unfortunate results might have followed.

The Committee met again on the 18th. Amongst those examined,

Mr. Whichcord, architect, and one of the vice-presidents of the Royal Institute of British Architects, said he had carefully examined the provisions of the Bill, especially those in regard to theatres and music-halls. He believed they could be fairly carried out without any interference with the Lord Chamberlain's department. From 7,000 to 8,000 houses were built in London every year, and he did not think it was desirable to call upon the architect in every instance to deposit plans and sections before erecting a house. It was, however, necessary that the plans of public buildings should be submitted to some supervising authority. He would not advise too minute an interference with building operations. At the same time there should be an absolute prohibition against the use of inferior materials, which, in many instances, rendered the dwellings constructed of them not only unsafe, but positively unhealthy. In these respects the provinces were regulated by bye-laws, and he saw no reason why bye-laws should not be laid down for the metropolis also. At present, if an old building were pulled down in London it was required to be put back to the general line of frontage in the street, and the owner was compensated for any land which he sacrificed. It was not proposed by the present Bill to alter the general law in this respect.

Mr. John Hollingshead, lessee of the Gaiety Theatre, stated that, including the very small places with the theatres and the larger music-halls, which were worked under about six different jurisdictions, there was a total of 472 places of amusement in London. The first jurisdiction was that of the Crown. Under that there were two patent theatres, Drury Lane and Covent Garden, which were under no control whatever as to space. The Lord Chamberlain had no power to go into them except what was given to him by the courtesy of the managers. Then there were forty-five theatres licensed by the Lord Chamberlain, capable of holding in the aggregate about 80,000 persons. Ten theatres were licensed by the divisional magistrates, one of which was the Court Theatre at Chelsea, which was about 20 yards outside of the Lord Chamberlain's jurisdiction. Those ten theatres held altogether about 38,000 persons, because under that head he included the Crystal Palace, which contained two theatres and one concert-hall under the same roof. There were three first-class halls holding from 10,000 to 20,000 persons; six second-class halls, holding from 2,000 to 3,000; thirteen third-class halls, holding from 800 to 1,500; fifty-three fourth-class halls, holding from 300 to 700 persons. This made a total of seventy-five. There were 272 smaller places, which might be called public-house concert-rooms, or harmonic meetings. This gave to the Middlesex magistrates 347 places which they licensed. The Surrey magistrates, on the other side of the water, had a separate jurisdiction over fifty-eight places of a smallish type, three very large places, the Surrey-gardens, Canterbury Hall, and South London Music-hall, making altogether sixty-one, or 408 places altogether under those two branches of magisterial authority. The City of London had a separate jurisdiction, but it only licensed two places. He certainly thought that most of these places might be very much improved in their exits and entrances, and probably at a moderate cost. The Metropolitan Board of Works being a surveying body, and having a large staff of competent officers, such as builders and architects, at its disposal, would be competent to undertake the supervision of these buildings in the interests of the public. There was no objection to the survey of the Lord Chamberlain. It was more or less efficient, and it had always been exercised with a great deal of consideration for the interests of managers, and with due regard for the interests of the public.

Mr. Philbrick.—With regard to music-halls, do you think that many of them are structurally defective?

Mr. Hollingshead.—I should say, speaking generally, that the whole of the 425 music-halls are more or less structurally defective in their entrances and exits.

The Committee postponed the preamble of the Bill, and proceeded to consider the clauses. Upon clause 4, which prescribes the distance from the centre of existing roads at which new houses are to be erected.

Mr. Round, for the Mercers' Company, stated that his clients possessed considerable property in the City, and they objected to the clause, because, as it now stood, it would prevent the pulling down and re-erection of any building in most of the existing narrow streets, because if the line of building was to be thrown back there would not be sufficient space left to build upon. He contended that, as there was no compensation clause, this would virtually amount in many instances to the confiscation of the rights of the Mercers' and other City Companies.

After considerable discussion the committee decided that existing forecourts not built upon should be brought within the operation of the clause.

A fuller report of each day's proceedings will be found in the *Morning Advertiser*.

Wednesbury Free Library and Public Baths.—On Wednesday the Free Library and Public Baths were opened at Wednesbury.

MIDLAND COUNTIES ART MUSEUM: NOTTINGHAM CASTLE.

THE Town Council of Nottingham are engaged on a very important undertaking, and want the aid of those who recognise the value of what they are doing. In consequence of the success which attended a loan exhibition in the town in 1872, the Council appointed a committee to take into consideration the desirability of providing a suitable site for the location of an exhibition, with a view to its becoming a permanent institution. It was ultimately resolved that Nottingham Castle and the adjoining grounds would afford a very eligible situation for the exhibition, and the Town Clerk was instructed to make inquiries of the agent of the Duke of Newcastle's trustees to ascertain if they were willing to grant a lease of the castle and grounds for a long term of years at a reasonable rent. The practicability of adapting the existing buildings was fully discussed, as was also the probable costs of the necessary work, which were estimated at the minimum sum of 20,000*l*.

The proposal of the committee received the hearty concurrence of the Council, and it was also resolved that, in the Improvement Bill to be promoted during the then next Session of Parliament, clauses should be inserted enabling the scheme to be carried out. The Bill has been successfully promoted, and clauses have been inserted enabling the Corporation to take, and the trustees of the Duke of Newcastle to grant, a lease of the castle and grounds for a term of 500 years,—the Council to use and maintain the same as a public museum and exhibition.

The Town Council are now the owners of Nottingham Castle and the grounds immediately surrounding it for a term of 500 years. The works of restoration have been proceeded with, and it is hoped that the castle will be formally opened to the public by their Royal Highnesses the Prince and Princess of Wales, at the end of the month of June or the beginning of the month of July in this year.

The castle is situate on an eminence close to the town, but entirely separated from it, in a most commanding position, and stands wholly within its own grounds, so that it is not liable to casualties from fires arising in other buildings. It is spoken of as early as the time of Alfred the Great, was rebuilt by William the Conqueror, and has a most interesting history. In more recent days William Cavendish, first Duke of Newcastle, bought the castle from George Villiers, second Duke of Buckingham, to whose grandfather Francis, Earl of Rutland, it had been granted by James I., and although in his eighty-second year, he, in 1674, commenced to remove the ruins of the old castle, and lived to see the present structure rise a yard above the foundation. It was finished according to his will, and by the model he left, in 1679, by his successor. The rebuilding of the castle was to him a labour of love, for in the memoir of his life, written by his wife, the Duchess of Newcastle, it is therein stated, as quoted by Mr. J. Henry Brown in a recently-published *brochure*, "Some of his lands could not be sold, being entailed, and some he sold in Derbyshire to buy the Castle of Nottingham, which, though it was ruined and demolished, yet it being a seat which had pleased his father very much, he would not leave it since it was offered to be sold." By the liberality of this noble family, so long and so honourably connected with the county, the Corporation of Nottingham have been enabled to acquire a lease for 500 years of this historical site and building, so inwoven with the history of the country; and having at an expense of upwards of 20,000*l*. restored it as a palace of art, it is to be hoped that its future history will be as pacific and civilising, as its past has been warlike.

Its walls are of enormous thickness, and the internal arrangements are of special fireproof construction. It is asserted, and we believe correctly, that the alterations, when completed, will supply the finest art-galleries, considered in relation to situation, size, and proportion of rooms, lighting, and general suitability, to be found in the United Kingdom outside the metropolis. These, then, the council propose to fill with only those objects which are worthy of attention, and many promises of loans have already been received from some of the richest collections in the country. We shall be glad if some of our readers will help them.

The building consists of a ground-floor story

of seven rooms, the largest of which is of the size of 54 ft. by 26 ft., and the smallest is of the size of 25 ft. by 21 ft. The next story is approached by two spacious stone staircases, affording a large amount of valuable space for the exhibition of paintings and statuary. On this floor there are six galleries, the largest of which is of the size of 146 ft. by 26 ft., and the smallest 25 ft. by 21 ft. These galleries form a magnificent suite of rooms. The heating is by means of hot water: the lighting is from the roof, with an under-sash, and care has been bestowed on the ventilation.

The immense wall space at the disposal of the Council will enable them to give an ample margin to every picture; and it is the intention of the Castle Museum Committee to isolate every picture and work of art so as to give it room to produce its full and natural effect.

The Corporation have taken up the matter with great spirit, and are thoroughly determined to bring to a successful issue a local permanent Art Exhibition and Museum of a high character.

The Town Council have secured the services of Mr. George Harry Wallis, of the South Kensington Museum, as director and curator; and he will be assisted by Mr. Holbrook (the present secretary) and a sufficient staff. The present Mayor (Mr. W. G. Ward) is working heartily in the cause, and there seems every prospect of a great success.

ST. LAWRENCE, PEMBROKESHIRE.

THE above picturesquely-situated church was re-opened by the Bishop of St. David's on the 28th of February, after a compiete restoration. The plan is rectangular, consisting of a nave, 30 ft. by 17 ft.; chancel, 21 ft. by 11 ft.; and south porch, 8 ft. by 7 ft. The north nave wall and the upper portion of the east wall of the chancel have been pulled down and rebuilt; the former, of more recent date than the other walls, had been erected with inferior materials badly bonded together: it therefore leaned very considerably, and when the roof was removed was in some danger of falling. These works were not included in the general contract, as it was hoped all rebuilding might have been avoided, the desire being of course to preserve as much of the old work as possible. The only new masonry is in the upper portion of the western double-bell gablet and the five new windows. The old windows were of the ordinary unhung-sash description, fit only for the humblest cottage homes, and as unfortunately not a trace could be found of the original ones, the style of the chancel and porch arches, which seemed to indicate the date of the church at about the fourteenth century, has been selected for the new work. The font, which was found huddled up in the north-western corner of the nave, is now placed on a new base on the west side of the entrance. A considerable improvement, both as to appearance and comfort, has been obtained by lowering and altering the slope of the footpath approach commencing at the road, thus enabling the original level of the floor and the internal height of the walls to be retained, and the steps down into the porch to be done away with. This lowering of the footpath has revealed the original proportions of the porch; and the nave walls, which were considerably underground, have been likewise unearthed, giving the sacred fabric a more imposing appearance, and at the same time securing it from damp, a channel, with drains below, having been formed round the walls. A bed of concrete, with a similar object, has been laid over the whole internal area. The porch and nave passages have been paved with slate, having Staffordshire tile borders to the latter, the chancel and sacrarium floors being laid with Webb's (Worcester) encaustic tiles, a portion of those in the latter being glazed.

There were traces on the east side of the chancel arch apparently of a rood-loft staircase on the north side, and of a hagioscope on the south side; both of these have been left untouched, a remark that also applies to the ceiling of the porch, its outer and inner arched entrances, and the chancel arch. These, with the font, were unfortunately the sole features of antiquarian interest remaining.

The roofs were of comparatively modern date, and have been constantly out of repair, and devoid of all architectural worth. They have been replaced by new ones of pitch-pine.

The number of worshippers now provided for in comfortable open pitch-pine seats on raised wooden platforms is 77; previously, the accommodation was for only 55.

It was found necessary to plaster the inside and point the outside of the walls generally, on account of the roughness of the old work.

The architect was Mr. E. H. Lingen Barker, and the builders were Messrs. T. & J. Lloyd, of Haverfordwest.

ROYAL INSTITUTE OF BRITISH ARCHITECTS.

AT the special meeting of the members of the Institute, held on Monday evening last, the President (Mr. Chas. Barry) in the chair, it was, we understand, unanimously resolved to recommend the award of the Royal Gold Medal this year to Mr. Alfred Waterhouse, A.R.A., a recommendation which, it is hardly necessary to add, has our hearty concurrence.

The following gentlemen were named as the successful candidates for the various prizes given by the Institute:—

For the Soane Medallion (subject, a Convalescent Hospital for Sixty Patients),—Mr. H. M. Robinson.

For Sir William Tite's Prize (subject, Design for an Italian Façade of a Block of Buildings in a principal Street of the Capital),—Mr. Henry Tanner.

For the Grissell Medal (subject, Two Bays of a groined Cloister, Thirteenth-century style),—Mr. G. B. Lewis.

Only two sets of drawings were submitted for this prize, the second of which was so good also that a special medal of merit was awarded to their author, Mr. J. Martin Brooks.

The Institute Medal and 5*l.* 5s. were awarded to Mr. G. H. Shackle, for the best drawings illustrative of an existing building, the subject in this case being Markenfeld Hall. A medal of merit was also awarded to Mr. F. Pinches, for his drawings of Fountains Abbey; and Mr. B. Priestly Shires, the author of another set of drawings for the same prize, received honourable mention.

For the Essay prize only one essay had been sent in, which was not considered of sufficient merit to justify the award of the prize.

We may mention that twelve sets of drawings were sent in for the Soane medallion, three for Sir W. Tite's prize, and six for the Institute medal. A strong opinion was expressed by several members as to the high merit of the drawings as a whole, and the amount of work contained in them; and one or two suggestions were thrown out as to the advisability of placing in the Institute library some permanent records of the best of the drawings, in such cases, by means of photo-lithographs or otherwise, which we hope the Council will see their way to carry out.

Although the proceedings were officially private, it will hardly be any breach of confidence if we mention, for the information of members who were not present, that the requisition which had been made, to consider the propriety of returning to the old system of two Honorary Secretaries and a paid assistant, received hardly more than a formal consideration, and the resolution to maintain the present method of carrying on the business was carried all but unanimously; so that the Secretaryship, as an official post, remains *in statu quo*.

MESSRS. DOULTON'S POTTERY.

DURING two or three days of the present week the articles which are intended by Messrs. Doulton & Co. for the forthcoming Paris Exhibition have been on view (by invitation) in their fine new building on the Albert Embankment. It is with great pleasure that we give publicly our tribute of admiration to that which must have been privately felt and expressed by every visitor to the collection. As our readers know, we have on several occasions before given our testimony to the exeellent and really artistic spirit in which the work of this eminent firm has been carried out, upon a system which encourages and stimulates individuality of design and workmanship, and is quite opposed to that system of mechanical production which has been the bane of modern art-workmanship. In the collection of objects arranged for transportation to Paris we have the pick of the result of their system, and a very beautiful and encouraging result it is. We find here fine and rich colour, fine texture, graceful and suitable form and outline, and an almost endless variety of design based upon nature, but sufficiently conventionalised to suit the condition of the material and the method of workmanship. The existence of a collection of artwork such as this, which is really equal in beauty and interest to almost any ancient work of the kind, is a refreshing proof that real art, in pottery at all events, is possible in our own day if we go the right way to get it. Those who work with Messrs. Doulton aim, however, at more than merely ornamental art. We have several times noticed, among the sculpture at the Royal Academy Exhibitions, the small designs in alto-relief in terra-cotta by Mr. Tinworth. This talented artist has produced a Doulton-ware fountain, which has been the central object of attraction in the collection on view, and is really remarkable for the beauty and interest of the work. It is in a circular-pyramidal form, and the water runs down a channel encircling the whole in a spiral inclined plane from top to bottom, while above the water-channel, along its whole course, are reliefs representing different subjects in Scripture history connected with water,—the finding of Moses; Gideon selecting his soldiers at the river side; Rebekah at the well; David pouring out the water brought to him by the three "mighty men," &c.; in this and other instances, the water poured out by the principal figure becomes a little rill falling into the principal stream in a very realistic manner. The historical subjects are interspersed with studies of different aquatic or river-side animals. We have rarely seen a specimen of modern work with so much of the piquancy and lively interest so characteristic of Mediæval art; combined, too, with modelling far superior to what was attained in Mediæval work. Many of our readers who have not seen it at home will, we hope, see it in Paris, where, we trust, Messrs. Doulton and the artists who work with them will obtain the credit they deserve for the work they send out, and the artistic spirit in which it is done.

FORMAL PRESENTATION OF THE NEWINGTON CLOCK-TOWER TO THE VESTRY.

THE clock-tower which has been erected on the site of the old Newington Parish Church, at the cost of Mr. R. S. Faulconer, and which has already been described in the *Builder*, was formally presented to the Vestry at their last meeting on behalf of the donor. The inscription on either side of the doorway, on panels filled with polished red granite, is longer and more historical in character than was originally intended, and runs as follows:—"This clock-tower, erected A.D. 1877, by R. S. Faulconer, Esq., formerly a Churchwarden of the Parish of St. Mary, Newington, probably marks the site of the Saxon church mentioned in Domesday Book, in connexion with Walworth, as it certainly does that of several churches which have been built in succession upon it. The last church upon this site was erected in 1793, and was removed under authority of an Act of Parliament in 1876, in which year, on May 1, the new Mother Church of St. Mary, Newington, in the Kennington Park-road, was consecrated." The clock has been manufactured by Messrs. Gillett & Bland, of Croydon. The hours are struck upon a bell of 9 cwt., and chimes at the four quarters on four other bells in proportionate weights, the arrangement of the musical notes being the same as at the Westminster Palace. The five bells weigh altogether about 23 cwt. There is a self-acting gas apparatus fitted to the clock for the purpose of turning the gas up and down, and so contrived as to suit the varying lengths of nights at different seasons of the year.

As has been already stated, Messrs. Jarvis & Son are the architects, and Messrs. Colls & Sons, of Camberwell, the contractors.

Value of City Property.—The corner plot of freehold land, situate in Watling-street and Bread-street, being part of the site of the late Church of All Hallows, and containing a ground area of 3,270 superficial feet, was offered to public competition at the Auction Mart, on Wednesday, the 20th inst., by Messrs. Fuller, Horsey, Sons, & Co., when, after some spirited biddings, the property was sold at the sum of 32,650*l.*, or at the rate of 10*l.* per square foot.

TOWN DRAINAGE.

LIVERPOOL ENGINEERING SOCIETY.

THIS society held its usual fortnightly meeting on Wednesday evening, March 13th, at the Royal Institution, Colquitt-street, Mr. Robinson Souttar, president, in the chair.

Mr. William Kelly read a very practical and instructive paper on "Town Sewerage and House Drainage," which elicited a good discussion. The author pointed out that in designing a system of drainage it is necessary to take into consideration, first, the area of the town or district; second, its rainfall; third, its physical outline; fourth, the present and probable future increase in the population; fifth, the water-supply of the district. Dealing with these primary considerations in order, the author next proceeded to describe, by means of drawings, the form of sewers best adapted to the requirements of town use, and gave the proportions suitable in practice. Good common bricks, set in carefully-prepared mortar, were advocated for the construction of town sewers, and very careful inspection was shown to be indispensable. The formation of junctions with pipe-sewers to private houses was next described and illustrated, and the use of lampholes, manholes, storm-overflows, and other necessary appurtenances was explained. Proceeding to house drainage, it was stated that imperfectly drained and sewage-reeking floors and walls cause a large proportion of the deaths among the cellar population of towns, and much blame is attached to those who neglect to thoroughly drain the sites of intended dwellings. The importance of disconnecting the inside of houses from the main sewer by traps was strongly urged.

THOUGHTS ON RESTORATION.

LIVERPOOL ART CLUB.

ON the 11th inst. a dinner and *conversazione* took place at the Liverpool Art Club, and a paper was read by Mr. George Aitchison, B.A., architect, entitled "Some Thoughts on Restoration." Mr. Aitchison criticised and ridiculed what he termed the "Restoration Mania," which was one of the features of the day. Restoration might be described as the outward expression of the living and rampant form of imbecility. He asserted that we could not restore, if we would, and he hoped to satisfy his hearers that we should not, if we could. In support of his view he asked his audience to suppose the case of a fine church, built throughout at one epoch, and adorned with carvings and sculpture. This had fallen into decay, and the process of restoration was commenced. He held that even though the best restorers might be employed on the work, the result would be false art. There could be but a plausible suggestion of what existed, or a copy of something found elsewhere. The original work was living art, the man who designed it did so because he thought it was beautiful in itself, and proper in its place; but the man who restored it put in his new work with a very different feeling. He did so because he thought his new work might be something like the old, and whether it was beautiful or ugly was no concern of his. The same principle guided his ornament; the restorer might never have taken the trouble to think that the ornament was once a transcript from nature, made to show the peculiar beauty that struck the architect or carver. The new piece was a copy of some other old piece; it had no connexion with the church, and it represented neither old art nor new. Restoration, in fact, was architectural forgery. It was false in principle, and, even if there were no other reason, it must be false, because it was impossible. Mr. Aitchison went on to say that people did not want true restoration; they wanted their churches put into something like decent and congruous fitness for their present purpose. A restored building looked very pretty to the vulgar, but what were the feelings of the antiquary who found, with disgust, that half the work was forged? He also deprecated the restoration of pictures. In the course of his paper he said he hoped to see, before he died, a grand picture, in mosaic, on a blue ground, placed under the portico of St. George's Hall, the finest modern Classic building in the world.

Shipton-Thorpe, Market Weighton.—The Ecclesiastical Commissioners are erecting a vicarage house in this new parish. The cost is 1,350*l*. Mr. W. M. Teulon is the architect.

CLARE COLLEGE, IRELAND.

MR. F. O'CONNOR has been appointed (by Dr. Ryan, the Roman Catholic Bishop) architect of the new College at Clare. The building will be erected on land situate on the road from Ennis to Clare. It will face the south, and will consist of a centre building with wings extending alike. The front will be 200 ft. in length; the wings 116 ft. each, and accommodation will be provided for 120 students. The building will be three stories high, the style of architecture adopted being domestic Gothic. The outer walls will be built of ashlar masonry lined on the inside with brickwork. The quoins, dressings of doors and windows, string-courses, bands, plinth, corbels, barge courses, &c., will be of chiselled stone. A clock-tower, 20 ft. square, and 120 ft. high, will be placed in the centre of the building, and pointed windows will be placed at each end of the corridors on the upper floor. The principal entrance will be through an open portico, into a large vestibule, on each side of which there will be waiting and reception-rooms. The principal staircase will be opposite the vestibule, and will be lighted by a large three-light window. To the left of the principal entrance will be the library, priests' dining-room, the large dining-hall, 50 ft. by 25 ft., kitchen, pantries, larder, &c., and the servants' apartments. On the right will be four large class-rooms, music-rooms, and the large study-hall of same size as the dining-hall. The entrance for day boys will be on the right wing next the Clare-road. In each wing there will be staircases leading to the upper floors. The staircases are placed near the dining-hall and study, so that the students will have easy access to these rooms. There will be forty single rooms on the first floor, and two large dormitories with lavatories, closets, &c., and also apartments, for the president and two assistant masters. On the second floor there will be thirty single rooms with two dormitories, lavatories, &c., and apartments for the vice-president and another priest, and also for two assistant masters; an infirmary, with nurse's room and surgery, is also provided on this floor, and in the event of illness the infirmary will be completely isolated from the rest of the building. Covered arcades will run round the inner play-ground, and a large open play-shed will be erected at the end of the ground. A cast-iron verandah will run along the front of the centre building, and will serve as a promenade for the priests during wet weather. The vestibule will be floored with Minton's encaustic tiles, and the large corridor on the ground-floor with coloured tiles. It is intended to fit up one of the large class-rooms as a chapel, until the Bishop is in a position to be able to build a large detached chapel. The outlay contemplated at present is about 15,000*l*.

DESTRUCTION OF RENFREW TOWN-HALL.

READERS know that the Renfrew Town-hall, one of the most imposing structures of the kind in the west of Scotland, was partially destroyed by fire on the morning of the 6th instant.

On sailing down the Clyde, or indeed in leaving Glasgow for the coast, either by rail, road, or river, the handsome tower of the Renfrew Municipal Buildings never fails to attract attention as a prominent feature in the landscape to the south-west of the populous city just named. The edifice, which did honour to Renfrew, as one of the royal burghs of Scotland, was a combination of the Baronial and Gothic style of architecture, and occupied a triangular site at the burgh cross, its dimensions being 100 ft. long, with a breadth of 40 ft. at one end and 60 ft. at the other. The frontage towards Hairst-street rose to a height of fully 60 ft., the north-east corner, surmounted by the clock tower, attaining an elevation of 135 ft. The roof of the building was flat-plated with lead. The erection of the buildings was commenced in 1871, the memorial-stone being laid on April 13th, 1872, and on October 17th, 1873, the building was inaugurated by Provost Gallacher, at that time head of the municipality. The architect was the late Mr. J. L. Lamb, of Paisley, the buildings being placed on the site of previous municipal chambers, erected in 1670, and to which a town-hall proper was added in 1826. The damage is estimated at from 12,000*l*. to 15,000*l*., covered by insurance to the extent of 7,000*l*. in the Scottish National Office. The resources of the royal burgh will not, however, be greatly impaired as the result of the disaster, as its present assets are 200,000*l*. and its liabilities only 27,000*l*. The ferry across the Clyde is said to yield alone an income of 1,000*l*. per annum.

INSPECTION OF THE TAY BRIDGE.

ON the 25th ult. General Hutchinson commenced his official inspection of the Tay Bridge. Six engines with their tenders, each weighing 75 tons, and which had been sent to the bridge by the North British Company for the purpose, were formed into a train, and the testing commenced by passing slowly over the structure to the north side. Notwithstanding the enormous weight of the train,—450 tons in all,—the vibration and deflection of the girders was observed to be very slight. The train was afterwards driven back at a greater speed, until it reached the most southerly of the large girders, where it was brought to a stand, the girder itself thus being subjected to the test imposed by sustaining the dead weight of the whole six engines. On this being done, the deflection of the girder was carefully noted. The testing of each of the larger, as well as the smaller, girders was carried out on the same plan, and the inspection was completed on the following day by running three engines coupled together over the bridge, the speed attained over the widest span being at the rate of forty miles per hour. The oscillation and vibration were found to be exceedingly slight, and we learn that General Hutchinson expressed himself as highly satisfied with the result of his inspection. As the station is not yet completed, some few weeks must elapse before the bridge is open for traffic.

THE METROPOLITAN BOARD OF WORKS AND THE NEW THOROUGHFARE FROM FARRINGDON-ROAD TO REGENT-CIRCUS.

AT a special meeting of the Metropolitan Railway Company, held last week, Sir Edward Watkin, the chairman, made reference to the new street which the Metropolitan Board of Works propose to make from Farringdon-road to Regent-street, but which, as will be seen from Sir Edward's remarks, has been postponed. He stated that the directors had been in communication with the Metropolitan Board on the subject, as they had got an impression that the Board would be disposed to make a fair arrangement with them, by which they would sell to the company for a fair sum the right of way under the new street, from Farringdon-road to Regent-circus. A railway between those points would open up a vast amount of new traffic, but the work was one of those undertakings which could only be done in the event of both bodies co-operating; and it had now been decided by the Board of Works that in consequence of their very numerous engagements, they were going to postpone the completion of the new street for a few years. Sir Edward then stated that in consequence of this decision the company's Bill for powers to construct a new railway from Farringdon-road to Regent-circus would not be prosecuted until the Board of Works were ready to proceed with the new street.

BRICKMAKING AT SITTINGBOURNE.

SITTINGBOURNE and Faversham, in Kent, are well known as places in which more bricks are annually made than almost any other district in England, and accounts from the locality state that the prospects for the future are even more promising than they have been in the past. It appears that some time ago it was feared that the brick earth in the neighbourhood of the Sittingbourne and Faversham manufactories was exhausted, and that the works would have to be closed, but it now turns out that very large quantities of brick earth have been found in fields near where the brick yards were first established, and it is believed that the supply is almost inexhaustible. This brick earth as it is got out, is now carted to the original brick-yards, and also to new manufactories which are in succession being established, and it seems that the landowners from whose fields the brick earth is being taken are making almost fabulous profits of the material. Some of these owners are said to have received for the brick earth got out of their land double and treble the sum the

land originally cost them, still, of course, retaining their ownership in the land.

Last season several of the brick manufacturers are said to have realised small fortunes, and as last year's bricks are reported to have been almost all bought up, it is expected that next season will again be a very profitable one. The assertion is that during the present year more than 300,000,000 bricks will be made in the Sittingbourne and Faversham district.

INDUSTRIAL CO-OPERATION.

THE first of a course of four lectures on this subject was given at Exeter Hall on Saturday last by Mr. Thomas Hughes, Q.C. The lecturer at the outset described the co-operative movement as one of the schemes the object of which was the well-being of the many, and maintained that the time had arrived when that must be not only the true but the absorbing object of pursuit of all who identified themselves with it. It could not be classed among modern schemes, as it dated from the middle ages, when the movement found its home in the monasteries, in which groups of men gathered together against the wrongs of feudal barons on the avowed principle of brotherhood. It would not be denied that it was in the monasteries trade first raised its head in England; and he noticed it here because it was said that trade sprang from competition, and not from fellow-work. Between the years 1834 and 1846 co-operative life was beginning to stir in this country, in spite of the difficulties which beset it, and a considerable number of stores were registered as friendly societies, several of which remained so registered to this day. It was not, however, till the great revolutionary crisis of 1848-9 that any strong impulse was given to the movement in England. He did not suppose that the ideas of M. Louis Blanc, or the works of the provisional government, were known but in the vaguest way to the working folk in the North of England; but co-operation, nevertheless, took its root there, and stores rose rapidly. The need of some sort of federation began to be felt, and conferences were held with a view to strengthen the societies, whose trade was hampered at every turn by the state of the law. In tracing the subsequent history of the movement, the lecturer dwelt upon the fact that the passing in 1852 of the Act relating to the condition of the working classes formed an important epoch in co-operative annals. The societies in the northern counties had been visited by individual promoters on several occasions. They were all by this time in communication with the London centre, and eager to turn the passing of the Bill to the best advantage. In the same year a conference met in London, and it was resolved that co-operative establishments should sell all articles exactly for what they knew them to be. No general conference was held for several years after, in consequence of the failure of the London institutions. Of the controversies which the revival aroused, their effect, said the lecturer, was to convince the country generally that the movement was neither revolutionary nor dangerous to property, and all those who cared to risk it found that it educated the working classes in the best sense, and opened up prospects to them which could scarcely be valued too highly. Turning to the establishment of those societies which had adopted the ready-money system, he believed they were, with two exceptions, registered as joint-stock companies, and had carefully confined their efforts to buying in the cheapest markets and distributing in the most economical way. One result of this was that the general public, instructed by the metropolitan press, had been misled, and taking this part of the movement as representative of the whole, had concluded for the present, as the *Fortnightly Review* said, that "co-operation concerns itself solely with the the redistribution of capital and its products; for the employment and duties of capital it has no word." The lecturer concluded by strongly recommending the particular form of the pursuit of the "well-being of the many" which he advocated to the most fastidious seekers for equality under the guidance of Mr. Matthew Arnold, as well as to the rest of the community. The lectures are given under the auspices of the Guild of Co-operators, which has been established for the purpose of spreading in the south of England a more general knowledge of the principles of industrial co-operation.

The remaining three lectures will be delivered on following Saturdays:—On March 23, Mr. Edward Vansittart Neale, M.A., will speak on "The Evils which Co-operation is specially directed to remedy"; Mr. Lloyd Jones and Mr. E. Owen Greening will follow. Admission is free.

NEW COVERED MARKET AT BURSLEM.

THE memorial stone of a new vegetable market at Burslem was laid on the 13th inst. by Mr. Robert Heath, M.P. The building, which was begun some months ago, will cover an area of 1,800 square yards, of which 420 will be occupied by six shops abutting on Queen-street. They will also have communications backwards with the market. Over them will be a series of offices for borough purposes, with entrances in Queen-street. The total length of frontage in this street will be 125 ft., and the height to the top of the central tower 96 ft. The market will be approached by two entrances from Queen-street,—one from Brickhouse-street and one from the Market-place. The lower part of the façade (in Queen-street) will be of Yorkshire stone, with small granite pillars, and the upper portion of red brick with stone dressings. The roof of the great hall will be of wrought iron, supported on twin columns, with ornamental capitals. The whole of the glazing will be done on the principle invented by Mr. W. E. Rendle, and which has been largely adopted by the Government and many of the railway companies. By this plan the panes are inserted in metal grooves, and putty is entirely dispensed with. The new building is in the Gothic style, and has been designed by Mr. E. M. Richards, the town surveyor. Messrs. H. & R. Inskip, of Longton, are the contractors for the brick and stone work; and Messrs. Hill & Smith, of Brierley-hill, supply the iron roof. The first of these contracts is for 13,959*l.*, and the other for 1,350*l.* The site cost 6,000*l.*, and the total outlay on the market when finished will be upwards of 25,000*l.*

THE CORPORATION OF SHEFFIELD AND THE BOROUGH ENGINEER.

SIR,—My attention having been directed to Mr. Clarke's letter on the above subject, I consider it my duty to state in reference thereto, that during the past year I have executed engineering works for the Corporation of Sheffield of the value of more than 100,000*l.* The chairman of the Improvement Committee challenged the council to appoint any eminent engineer in the kingdom to examine and report upon the work, and if he could estimate more than 100*l.* worth of defective work the chairman was prepared to give the council a check for the sum over and above that amount. As to this small portion of bad workmanship, I distinctly told the Highway Committee at the time it was being executed, that I would not accept any responsibility, as the work was done in accordance with a resolution passed by them in opposition to my expressed opinion and advice.

I have now been engineer and surveyor to the Corporation of Sheffield for four years, and this is the only charge which has been brought against me up to the present time.

A quantity of irrelevant matter was introduced into the discussion at the Council meeting, and statements made which I cannot recognise, as I have had no opportunity of explaining or contradicting them.

The above is the only reason which has been brought under my notice why the Corporation have resolved to request me to terminate my engagement with them.

P. B. COGHLAN,
Borough Engineer and Surveyor.

Sheffield.

*** From what we have been able to learn of the case it certainly seems to us that Mr. Coghlan has fair ground of complaint.

SIR,—Mr. Ellice-Clarke's letter with reference to the way in which the Borough Surveyor of Sheffield has been treated should be a caution to candidates for the office. One can hardly believe that the Corporation of a large borough like Sheffield would behave so dishonourably towards an important public officer as to have condemned him unheard. It shows the necessity of having some protection from the Local Government Board. This the Association of Municipal Engineers and Surveyors has sought, at the hands of the Central Board, and I hope those who make the surveyor the instrument to carry out public health laws, will protect him in doing so, from the party feeling and interested motives that so frequently characterise local governing bodies, especially of small towns.

E. BUCKHAM.

Town Hall, Ipswich.

THE HAYMARKET ACCIDENT.

CAST IRON COLUMNS.

SIR,—The Haymarket accident proves that a good architect, a district surveyor, and a competent foreman, can put up unsafe cast-iron columns without their being able to detect the defects of the casting. This does not astonish me, for I have long ago made up my mind that, though theoretically a hollow cast-iron column is the most resisting of supports, practically it is the very worst, because its defects are concealed. I have it from a man of great experience that he has often found hollow columns present, after fracture, an irregular section, in which one side of the ring was as thin as a sheet of paper, while the other was much thicker than it was designed to be. This is caused by the difficulty of keeping the core quite immovable when casting. I think that architects would be wise never to employ cast-iron columns where great weights have to be supported; but to prefer cross-section stanchions. They offer, it is true, according to mathematical principles, less resistance than annular columns containing the same amount of material; but they can be depended upon bearing what they have been calculated to bear, as all their surface is exposed to view, and can be thoroughly examined before they are used. Stanchions, I know, are avoided because considered ugly; but I contend they need not be; they are even more capable of artistic treatment than columns. I know of two examples which bear out this opinion. The balconies of the artisans' dwellings at Battersea are supported by stanchions, where the latter produce a very elegant effect of lines. Another very instructive example are the candelabra of the Conservative Club, St. James's-street, which are of cross-section ornamented with little cast-iron panels riveted on. The effect of these is very pleasing, and I believe it wants but a little goodwill for architects to develop this principle of construction and get beautiful results.

LAWRENCE HARVEY.

VENTILATION.

SIR,—The *Times* alludes to the science of ventilation. Architects should study the chemical nature of the gases that compose the air, and the contrivances for warming and ventilating buildings.

In a workshop where pure air without draught was necessary, the air near the floor was kept warmer than that near the ceiling, as shown by thermometers, and single feathers suspended from the ceiling about the middle of the room, remained motionless. This test applied to private houses and public buildings, when in full use, will prove them to be healthy, because it involves openings at the top to let out the heat, and also to let in cold air without causing draught.

SANITAS.

EXPERIMENTS WITH IRON AND CONCRETE.

SIR,—In your recent article under the above heading, you refer to the specimen of our artificial stone, submitted by Mr. Fowler, and you state 10 ft. or 12 ft. to be the maximum bearing, and that the question of the stability of the structure depended upon the behaviour of the main beam.

Will you allow us to state that by our mode of construction the columns and main girders are covered with our fireproof material, our practice being to protect the whole of the constructive ironwork with a covering of concrete, the whole of the ingredients of which have been previously calcined.

With regard to the size and position of iron in forming lintels, arches, &c., 2 in. stout hoop-iron on edge is cast in it as near the bottom edge as practicable, while for bressumers and girders to carry heavy walls we use 4 in. or 6 in. flitches, blocked and bolted 10 in. apart, and then filled in around and over with material the full thickness of wall, and 18 in. or more deep.

In forming roofs, landings, floors, &c., we have for the last sixteen years used bar iron 2 in. or 3 in. deep with small round rods running transversely through them, thus forming a network which is filled in and over to a thickness of 5 in. or 6 in., the top being finished with a fair face. Fire-proof ceilings are formed in a similar manner *under* the main girders.

In proof of the fire-resisting qualities of the material, we have used it for the crowns of

furnaces and covering for flues, and its behaviour in large fires has been most satisfactory.

In 1862 we took out a patent for fireproof construction, and we believe it to be the only thoroughly fireproof system now in use. As to the adaptability of the artificial stone for structural and architectural purposes, we have used it with advantage in every case where natural stone is ordinarily used; but it is very important that the cement should be of the very best description, and for years past we have used none but that manufactured by Messrs. Hilton, Anderson, & Co. M. ALLEN & SON.

PARTY-WALL CASE.

STANDARD BANK OF SOUTH AFRICA *v.* STOKES.

THE defendant, after giving the usual party-wall notices, and after the plaintiffs had appointed Mr. Blashill to act as their surveyor, and meet his surveyor, commenced to execute deep underpinning in order to obtain a sub-basement for his new building in Clement's-lane, City, no third surveyor having been selected, and no award made.

The Judge (the Master of the Rolls) reviewed the question of the right of parties at common law as tenants in common of a party-wall, deciding that each party might deal with the wall, even to the extent of pulling it down without giving right of action to the other party, provided his object was to improve one or both properties, and was carried out properly. (This seemed to be a question of doubt.) But as to party-walls in London, he held that the rights of each owner are fully set forth in the 83rd section of the Metropolitan Building Act, which by implication excludes all other rights. He held that though underpinning is not specially mentioned in that section, the word "raise" (in Clause 6) includes "underpinning," or *extending* a wall even in a downward direction! Also, that by the 11th Clause underpinning came within "other necessary work," even though there was no necessity beyond the defendant's wish to make an additional basement.

Finally, however, he decided that the defendant was altogether in the wrong in proceeding with the work without a third surveyor and an award, and condemned him in costs.

The matter is now to be settled by Mr. Blashill and Mr. Batterbury (the defendant's surveyor), and Mr. Clifton (chosen umpire), as referees under the Court, the Judge objecting, for some reason, to remit the matter back to the stage when the third surveyor ought to have been appointed, so that all should go on under the Act,—a course to which, it seems, both parties were willing to agree.

BREACH OF CONTRACT.

HURLSTONE *v.* COLLS & CO.

THE plaintiff, Mr. Hurlstone, is a revising barrister, of Slaugham, Sussex, and the defendants, Messrs. Colls & Son, are builders carrying on business at Dorking, Surrey, and also in the metropolis, and who had paid into Court 15*l.* in full satisfaction of the alleged breach of contract.

Mr. Hurlstone, the plaintiff, who was so crippled and infirm as to be carried into Court, arising, as he stated, from the breach of contract by his builders, appeared both as counsel and witness. He said that he was the owner of two cottages in the parish of Slaugham, one of which he sometimes occupied as his own residence. He contracted with the defendants to carry out specified repairs to both cottages, but after commencing the work, and carrying it on to a certain extent, defendant's men suddenly left off the job, and both houses were in an uninhabitable state when the workmen left off. He was then obliged to incur a considerable expense in putting the cottages into their original habitable condition, and was compelled, in September and October of 1877, to reside in an hotel in London in consequence of the inconvenience he was put to. By staying in one cottage a short time only he had contracted a severe cold, and by being compelled to apply for medical assistance this further added to the loss and damage he had sustained, and the doctor's bill made up the 50*l.* damages he now sued for.

The Judge asked the plaintiff to explain each item in his claim.

The plaintiff replied that, in consequence of the unfinished state in which the defendants left the premises, his building expenses were for mending holes, &c., in roof, 1 man, 66 hours at 7½d., 2*l.* 1s. 3d.; labourer, 56 hours at 4½d., 18s. 10d.; laths, hair, &c., 10s.; bricks, 1*l.* 5s. 6d.; cement, 4s. 6d.; plaster of Paris, 1s. 2d.: railway and cartage, 7s. 4d.; lime and sand, 18s.; slates, 1*l.* 16s.; boardings, &c., 1*l.* 9s. 1d.; carriage of ditto, 10s.; carpenters' work, 5s.; and shoot destroyed, 3*l.*; or, in all, 13*l.* 6s. 9d. for builders' work. In addition to this, he claimed, for inconvenience, hotel, and medical expenses, and other items, which slated up to 50*l.*

The Judge.—If a man breaks a contract, he is liable to the injury he has committed. Did you call in another builder to ascertain the damage?

The Plaintiff.—I did not; for there is not one resident nearer than Horsham, or Cuckfield, and I took the work on my own hands. My hotel expenses arose from my being compelled to leave my cottage and stay in London.

The Judge.—But if you had lived in your cottage you must have paid for your dinner. That question, as well as your doctor's bill, is merely one of law, which the jury will not have to deal with. If a man goes to live in a house and catches cold he cannot sue a builder for doctor's expenses, and, according to a case decided, such cannot be taken into account with the present question of damages. What the jury will have to decide is the amount of damage done to your property by breach of contract.

The plaintiff was then cross-examined by the defendant's solicitor as to his experience in building matters, prices of materials, &c., in neither of which could he give a satisfactory explanation, and admitted that no regular contract had been entered into, but the price left open.

A witness proved that defendant's men came to do the work on a Wednesday, and left on the Saturday, saying they should not come to the job any more.

For the defence, Mr. West was called, who said that last autumn he was in the employ of the defendants, and was sent down to plaintiff's cottages to superintend the job. He commenced, but did not finish, taking some plastering off the sitting-room and a few other jobs, but did not stay to finish as he was ordered to leave it. To put the premises in the state he found them would take a man seven or eight days, and he would gladly take the job in hand for 8*l.*

The jury eventually considered that the 15*l.* paid into court was amply sufficient, and the Judge said he quite agreed with the jury, and found for the defendants with costs.

It did not clearly transpire why the contractors gave up the job in so sudden a manner.

ARCHITECTS' ACTIONS.

HUNT *v.* THE WIMBLEDON LOCAL BOARD.

THIS was an action in the Common Pleas Division, before Mr. Justice Lindley, to recover about 200*l.*, the cost of preparing plans for the building of new offices for the Wimbledon Local Board.

Mr. Patchett, Q.C., and Mr. Walpole appeared for the plaintiff; and Mr. Marriott, Q.C., and Mr. Pattison for the defendants.

The plaintiff was an architect in Regent-street, and in July, 1875, he did the work now in question. The Board being in want of new offices spoke to their surveyor, Mr. Rowell, who was mainly employed in carrying out sewer work, but who had out one or two plans for buildings. He prepared some plans for the building, but afterwards he communicated with the plaintiff, who in consequence prepared other plans. Mr. Rowell's recollection of what passed was that he told the Board he was so much engaged with the sewers that he could not get out the plans for the new building. He told them he proposed to employ Mr. Hunt, and as there was no objection to his doing so he did employ him. The plans bearing Mr. Hunt's name were laid before the Board and examined by them.

The Rev. J. M. Brackenbury, the chairman of the Board, and other members of that body, stated that no authority was given to employ Mr. Hunt, and they did not know until recently of his employment. The building never was erected, in consequence of its being found too expensive, the lowest tender to build being 7,000*l.*, more than twice the amount of the estimated cost. Other plans were obtained from another person, and upon them the building was constructed. Upon this state of facts two heads of defence were raised,—one that Mr. Rowell had no authority to employ the plaintiff; and the other that the charge for the plans was to be calculated, not upon the tender price, but upon the estimated cost. Beyond this, there was the question whether the plaintiff could recover at all, the Board not having bound themselves by any contract under seal.

The jury, having considered the matter for half an hour, found that the Board had authorised the employment of the plaintiff; that new offices were necessary for the Board; and that to have the offices plans were necessary.

The verdict was for the plaintiff for 94*l.* 5s.

Mr. Justice Lindley said he should reserve his judgment until the question of law had been argued before him.

DANGEROUS STRUCTURES.

AT Marlborough-street the owner of Nos. 55 and 56, Great Windmill-street, was summoned before Mr. Newton by the Metropolitan Board of Works, for non-compliance with a notice served upon him requiring the removal of some blocks of stone which form the entablature of the new front wall.

Mr. Napier appeared for the Metropolitan Board, and a solicitor appeared for the defendant.

Mr. Kerr, the district surveyor, said that he had condemned the portion of the structure in question, and considered it dangerous to let it remain.

Mr. Walker, another district surveyor, happened to be in court, and he was asked his opinion by the magistrate. He said he had noticed the entablature, and considered it to be in an unsafe state, and that a heavy steam roller or fire-engine passing might bring it down.

For the defence, Mr. Dunch, surveyor, was called, and he said he considered everything quite safe, as the part complained of had been buttressed up by a cross wall.

Mr. Walker said if the matter was in his district he would not sleep comfortably while it remained in its present condition.

Mr. Newton, having ascertained what time might be given, made an order for the requirements to be complied with within fourteen days.

Barrow-in-Furness.—A block, including an auction mart and fine-art gallery, with lock-up shops on the ground-floor, has just been completed in this town. The fine-art gallery has an open-framed roof, with large lantern light, and the walls are lined throughout with boards, and covered with cloth. The works have been carried out for Mr. Richard Bailey, by Mr. James Ward, contractor, Mr. Howard Evans being the architect.

A "GREEK DRESS" PARTY.

LAST Wednesday there was given, not very far out of town, an evening entertainment of a rather unusual character, being a practical protest in favour of Greek costume, or at least the principles of Greek costume, for the fair sex; all the ladies appearing on the occasion in dresses modelled on the Greek type, in most cases pretty closely, though there were vagaries in both colour and form, which were hardly to be called Greek except by a stretch of the imagination. Some remarkably pretty combinations of tone and draping were to be seen, the effect depending, however, as may be supposed, a good deal upon the personality of the wearer. One lady, who, to the possession of remarkable natural advantages, had added a very complete realisation of true Greek costume, looked as if she had just stepped out of one of Mr. Leighton's best pictures; it was almost curious to see realised what one had only been used to see on the walls of a picture-gallery.

Several well-known archæologists, critics, and artists, were present to study the result, and it was understood that the object was, *bonâ fide*, to promote the commencement of a return to the Greek type of dress for women as the natural and normal form of dress, and therefore a refuge from the eccentricities of fashion. We should be sorry to throw cold water on an idea no doubt meritorious in its own way; but we fear this will not do. Admitting that it makes a very pretty dress for an evening party, what is to be made of it in the daytime and in open air, in this climate? Nor is it convenient, as some of our fair friends admitted that dancing would be impossible. Our own opinion is that the present type of ladies' dress in England is not at all a bad one to work upon, if we only had more variety and originality, and less of extreme developments,—the extreme of tightness, for instance, which is carried sometimes to a manifestly inconvenient and scarcely decorous point. And the modern English dress has, at least, this advantage about it, that it helps the main points of the figure, marking the waist especially, and making any tolerable figure into a good one. And dress ought to help the figure. In the Greek type of dress only an exceptionally fine, and at the same time rather full, figure has a chance; others simply disappear in the dress.

It is not the first time such an experiment has been made in London; we read not long ago in one of the many books of reminiscences that are published an account of a Greek dress reception in the earlier part of the century, but have forgotten names and particulars; only we remember an anecdote to the effect that a very distinguished statesman of the period who was present, said to one of the fair guests, "Lady ——, there is one question I should very much like to ask you; are you *really* as naked as you look?" and that the lady replied, with simple candour, that she was "very nearly." The story fits the early half of the century better than the latter half, certainly; and we believe ladies who wish to try correct Greek costume can do so without the experiment involving any such unsophisticated state of apparel.

When will some one give a party to improve the men's dress, which needs it much more? And what leading type would be taken in that case?

THE INHABITED HOUSE DUTY.

LAST week a deputation waited upon the Chancellor of the Exchequer to urge upon him certain points in connexion with the incidence of the inhabited house duty. Mr. Alderman Lawrence, on behalf of the deputation, said that what was desired was not the total abolition of this tax, but to bring before the Government points worthy of review. The question was of the highest importance to large commercial centres. If a professional man,—such as a lawyer, civil engineer, or architect,—occupied offices in a building, that building was liable to be charged 9d. in the pound. This anomaly would have before been removed, if it had not been for accidental circumstances. Mr. Hubbard and Mr. Goschen were now endeavouring to do it by the introduction of a clause into a Bill now before the House. The house-tax, which was imposed in a hurry, was the only tax that limited the mode of construction or manufacture of the article taxed. This tax did this in reference to the lowest section of the community. The buildings erected by Sir S.

Waterlow, the Baroness Burdett-Coutts, and the Peabody Trustees, escaped the tax by the designed mode of their construction. They had no front doors, but open staircases, with suites of rooms, the rental of each suite being under 20*l.* a year. It could not be said this style of artisan's dwelling was the best. Houses of this description might be built in a form better adapted to the wants of the people.

Mr. James Innes gave some practical illustrations of the anomalies of the tax; and Mr. Tomlinson pointed out its inequality in its incidence.

The Chancellor of the Exchequer, in reply, said that as we were now within three weeks of the time of bringing forward the Budget for next year, he should not find it very convenient at the present moment to enter at all fully into this question. He assured the deputation that what had been said in former years, as well as what had been said that day, had not failed to receive serious consideration, and he hoped it might be in his power, though it was not a very good year for anything of the nature of the remission of taxation, to make some proposal which would to a certain extent meet the wishes which had been expressed, or some of them at least.

COMPETITIONS.

The Rowland Hill Memorial, Kidderminster.—On the 13th inst. the Committee of Taste held a meeting, for the purpose of receiving the replies of sculptors who had been invited to send in models for the proposed statue. The hon. sec. stated that the following sculptors had signified their willingness to send in models for the statue:—Messrs. T. Brock, Thorneycroft, C. B. Birch, Homer, Bell, Fontana, Williamson, Mullins, and Wills. At the former meeting of the committee it was resolved that the statue should be of Carrara marble, and the pedestal of Aberdeen granite. Mr. Brock and several other sculptors pointed out that Carrara marble, while being much more costly than Sicilian, was not so suitable for an out-door statue as the other kind, and that to erect the pedestal of Aberdeen granite would absorb too much of the sum offered for the statue to enable the sculptor to devote much attention to the figure. He suggested that the pedestal should be made of Cornish granite. It was resolved to substitute "Sicilian" for "Carrara" marble, and "Cornish" for "Aberdeen" granite. Two prizes of 25*l.* and 15*l.* were offered by the committee for the best second and third models sent in by the sculptors.

Radcliffe-on-Trent Church.—The Church Restoration Committee, on the 11th inst., decided on the plan signed "Spes," for the restoration and enlargement of the parish church. The authors of the selected design are Messrs. Goddard & Paget, of Leicester. Honourable mention was made of the designs signed "'Keep Watch," and "Truthful."

THE SEATS OF THEATRES.

As there is now a Committee sitting in the House of Commons upon the new Building Bill, with regard to the alteration and supervision of theatres, &c., allow me to refer to the letter from me you kindly published (Vol. for 1877, p. 644), suggesting that as omnibuses are licensed to hold a certain number of persons, so should the theatres be restricted in the same manner, according to the area appropriated to the public. It would save a great misery to those who visit many of our theatres, more particularly in the upper boxes of the Haymarket and St. James's. Y.

CHARING CROSS.

SIR,—The tall hoarding just put up, continuing from the north end of Northumberland-street in the direction of and sweeping round to some way down Northumberland-avenue, entirely shuts out from public gaze the recently-resumed building operations going on within. It would be gratifying to the public to find, when the works are completed, that some consideration had been given to the convenience and facility of the foot-passenger traffic by increasing the width of the foot-pavement at this particular spot, as was suggested not so very long since in a letter to a daily contemporary (the *Times*), viz., from the Strand end of Northumberland-street to the Avenue turning, without interfering with or curtailing in any degree that of the carriage-way, which could ill be spared. Any additional width should be gained from the back. The original width, bounded as it lately was on one side by an open wooden paling, and by the stone curb of the carriage-way on the other, is very insufficient for the throngs of passers-by traversing it throughout the day, and most certainly before long will become much more so.

SPES.

MASTERS AND MEN.

Ballinasloe.—On the 14th inst. a large number of stone-cutters in the Ballinasloe Limestone Quarries went out on strike, in consequence of the employers reducing the wages from 32s. to 30s. per week. A deputation from the trade waited on the employers, but failed to come to terms. Subsequently, a largely-attended meeting of the stone operatives was held, when resolutions were adopted pledging themselves not to return to work till their demands were acceded to.

London.—The close of the masons' strike, which practically terminated on the 14th inst., leaves for the present (according to the daily papers) some 500 masons out of employment, who must be supported by the union until they obtain work at the old wages of 9d. an hour. The strike has now lasted thirty-two weeks, and is said to have cost the unionists, who have been aided to some extent by those of other trades, somewhere about 30,000*l.* On the other hand, it is thought that the master builders must have expended more than 10,000*l.* in the importation of foreign workmen, and the transport to London of men from different parts of the country.

Books Received.

Industrial Art: a Monthly Review of Technical and Scientific Education at Home and Abroad. Edited by T. H. LAMPREY. Volume I. London: Hardwicke & Bogue.

THIS is the bound collection of the numbers from July to December, 1877, of a recently-started journal, concerned especially with the illustration of Industrial Art. The scope of the publication is tolerably extensive, as it includes description, if not illustration, of both the artistic and the constructive element in all kinds of work which come under the heading of industrial art, which may be defined to mean all objects which, though primarily for use, are capable of ornamental treatment, and which, in the words of the preface to the volume, "ally designing power with mechanical skill." We think the promoters of the journal are justified in their opinion that there has been a call for such a publication, and that it supplies a want. They complain that England gained no real lessons of experience from the Art Exhibition of 1851; that though a large number of Illustrated Catalogues issued since that time contain examples of Art Industry which have in some measure served as text-books for designers, "it is no less true that the slavish imitation of the patterns contained in these official records serves only to perpetuate the bad art of 1851." The writer of the preface proceeds to complain of the preference given in such books to bad types of Renaissance art, and to state that it has been their object in "Industrial Art" to search out and reproduce the finest bits of pure Renaissance wherever they exist. It would be a mistake to infer from this that the majority of the illustrations represent old examples, as, in fact, comparatively few of them are of this description, most of them representing modern designs, chiefly by German artists. These latter, though not immaculate, are superior to what our knowledge of German taste would have led us to expect; and those examples which are given of old Renaissance work are thoroughly good, some of them very fine and unusual, and all well engraved. The writing might be improved in style, but in a publication of this kind illustrations and definite information are, perhaps, of more importance than criticism. At all events, there is quite a sufficient average of merit and good intention in the publication to induce us to wish it a continued and increasing success; but we should prefer to see rather less of the German element in the modern work that is illustrated.

The Bedroom and the Boudoir ("Art at Home" Series). By Lady BARKER. Macmillan & Co. 1878.

THIS is one of the series, other numbers of which we have noticed separately at more or less length, which professes to supply us with art for the whole of our houses, from kitchen to attic, or pretty nearly so. It is hardly necessary to say very much about it, partly, indeed, because it is rather better than some of its predecessors, which we thought it a kind of duty to deal with somewhat more at length, because their pretensions were so great and their performance so small, that it seemed desirable in public interests to show what the books really were which were put forth with such a magnificent flourish of trumpets. Lady Barker's book is somewhat less pretentious in style, and better in its illustrations than most of the others. Some of it can hardly be said to be about art, as it deals with considerations of what may be called nursery sanitation, which, however, is the practical basis of furnishing and adornment to a great extent. Lady Barker is quite right in her dictum about the bedroom, when used as a "sick-room," that everything should be plain and simple, and that "sick people detest anything like a confusion or profusion of ornaments or furniture." In feverish illnesses the pattern of a wall-paper will sometimes be the cause of continual and distressing irritation to the sufferer, more especially if it presents anything complex, which the sight is tempted to trace out again and again. The furniture illustrated is mostly pleasing in design, and in accordance with the theories expressed, which could not be said of some numbers of the series.

Miscellanea.

The Lambeth and Vauxhall Water Company, the penalties imposed upon which, for improperly cutting off a supply, were mentioned in our last number, received, in 1876-7, rather more than the average water-rental per house; the general average of the eight companies being 2·34*l.*, while that of the Lambeth and Vauxhall was 2·44*l.* The gross income of the company amounted to 9·78 per cent. on their capital outlay. The working costs came to 46·6 per cent. of revenue, which is 7·3 per cent. higher than the average of the eight companies. As this leaves a margin of 5·65 per cent. for dividend over all the capital expended, it may be questioned what justification the company has for the recent very considerable increase in their rates.

The Obelisk. — We understand that the South Kensington Museum, with the approbation of Professor Wilson, and the co-operation of Mr. Dixon, proposes to take a cast of the entire obelisk as soon as can conveniently be done after its removal to its site and before its elevation. Major Festings has been appointed by the Museum authorities to make the necessary arrangements for obtaining such a cast, and for its erection at South Kensington. It is considered that, in the event of the original being hereafter injured or defaced by the action of the London atmosphere, it would be of much interest to have such a cast, showing the exact state of the obelisk at the time of its arrival in this country.

Electricity and Street-Lighting. — Mr. J. A. Picton has informed the Liverpool Town Council that at a comparatively trifling outlay "it would be possible to light the town of Liverpool by electric light, without one farthing of expense to the ratepayers, the whole thing being done by the action of the rise and fall of the tide." A few evenings since Professor Tyndall presided at a meeting of the Society of Arts, and highly complimented Mr. St. George Lane Fox on the thoroughness with which he had worked out an idea which the learned Professor himself had entertained, viz., the simultaneous lighting of gas-lamps, whether in large buildings, or in the streets of our large cities and towns.

Archæology in Japan. — According to *Nature*, H. von Siebold, Attaché of the Austrian Embassy at Yeddo, and a member of the Japan Archæological Society, has lately published a *brochure*, which will serve as a guide for the systematic archæological study of the land; Von Siebold has lately made a most interesting discovery of a prehistoric mound at Omuri, near Yeddo, containing over 5,000 different articles in stone, bronze, &c. In a recent communication to the Berlin Anthropologische Gesellschaft, he describes the origin of the terra-cotta images found in old Japanese burial-grounds. It appears that up to the year 2 B.C. it was the custom to surround the grave of a dead emperor or empress with a number of their attendants, buried alive up to their necks, their heads forming a ghastly ring about the burial spot. At the date referred to the custom was abolished, and the living offerings were replaced by the clay figures, which have hitherto attracted so much attention.

Stony Stratford.—The parish church of St. Giles, Stony Stratford, has been re-opened, after undergoing considerable renovation. Externally little has been done, the principal portions of the work having been confined to the interior. It was deemed advisable by the architect to make colour the leading scheme for adornment. The walls and roofs of the nave and aisles are in monochrome, and the apse and quasi-chancel in polychrome. The old Perpendicular tower arch has, by the removal of an unsightly western gallery, been exposed to view, and the space intervening between it and the belfry filled with new timber framing, and new west doors to communicate with the vestry. The existing font has been raised on steps, and crowned with a spiral cover of oak, crocketed and suspended from a wrought-iron bracket. A new rood-screen of pitch pine marks out the *chorus cantorum*, and a new carved pulpit of the like material stands on the north side of it. The windows, formerly huge openings only, have been filled with varied geometric tracery in Corsham Down stone. The galleries, which, for want of space, could not be dispensed with, have been perforated and decorated. A new reredos, divided into three compartments, in the manner of a triptych, contains representations, on a gold ground, of the Crucifixion, with St. Mary and St. John in the centre, and angels bearing symbols in the sides. The panels in the screen, also on a gold ground, represent the Bishops of the Eastern and Western Churches, St. Giles, the patron saint, &c. In the windows of the apse are represented the twelve Apostles, with the Crucifixion in the centre, and the Resurrection and Ascension of our Lord in the side-lights; they are the gift of Mrs. Sankey and her son, in memory of the late vicar. The south quasi-transept window is being filled with stained glass to the memory of Josiah Michael and Ann Smith. The tile pavement in the chancel is from Messrs. Minton & Co. The carving is the work of Mr. Harry Hems, of Exeter. The wrought-iron gates of the screen and the front bracket are the work of Mr. William Downing. The reredos, screen, arcading around apse, font-cover, &c., were executed by Mr. W. Watson; and the painting and painted decorations have been carried out by Messrs. Plumb & Son, all of Stony Stratford. The stained glass is by Mr. J. G. Howe, London; the quarry glazing by Messrs. Pepper; the panels of the reredos are the work of Mr. E. M. Hale; and those in the screen are the work and gift of a lady visiting at the vicarage. The works and decoration have been carried out from full-size working drawings, and under the personal supervision of Mr. E. Swinfen Harris, jun., architect.

Eddystone Lighthouse.—A report from the Corporation of the Trinity House to the Board of Trade on the practicability of removing the Eddystone Rocks instead of rebuilding the lighthouse thereon has been presented to Parliament. The corporation is not prepared to advise any expenditure of public money having for its object the doing away with such a sea-mark as the Eddystone Light. The Elder Brethren explain that the use of the light is by no means confined to warning against an isolated danger, with whose removal its function would cease; but that the existence of that danger, in affording a platform for the exhibition of a light, has become not merely the means of giving a good lead into Plymouth, but of determining position and providing an essential link in that chain of general passing lights which, as defining a straight course up and down the English Channel, may be regarded as invaluable. It has been estimated by Mr. Douglass that to obtain the safe minimum depth of seven fathoms, which would be expedient, it would be necessary to remove about 100,000 yards of rock, or 1,750,000 tons; to which would have to be added the blasting of an inner danger (that of the Hand Deeps, at presently sufficiently indicated by the lighthouse), computed at another 250,000 tons, making in all 2,000,000 tons of rock to be removed, at a cost which cannot be estimated approximately at less than 500,000*l.*

Ramsgate.—At the meeting of the Local Board on the 19th instant, the salary of Mr. A. W. Conquest, C.E., their surveyor, was increased to 300*l.* per annum, and at the same meeting the Board considered a report prepared by that gentleman for the disposal of the sewage of the district by gravitation through an intercepting sewer discharging into the sea at the North Foreland.

Fees of Cemetery Companies.—A special meeting of the Cemetery Masons' Defence Association, grave-owners, florists, and others interested in the abolition of the fees lately imposed by some of the metropolitan cemetery companies, was held a few days since to determine what steps should be taken to compel the companies to desist from making these charges. Mr. D. C. Preston occupied the chair, and in opening the proceedings said this was a large question, because the fees charged by the companies had not fallen on the trade, but on the public at large. The conduct of the companies was most vexatious and unjust, but the Association had at last found a client who paid a fee to the London Cemetery Company under protest, and afterwards brought an action for the recovery of the fee, the solicitor of the Association conducting the case. The action was brought in the Bloomsbury County Court, but, on the application of the company, was removed by *certiorari* to the Court of Queen's Bench. Since then the company had withdrawn from the action, and informed the solicitor to the association that the fee had been paid into court. This, therefore, settled the question as far as this company was concerned. Two other companies — the Kensal-green Cemetery Company and the Norwood Cemetery Company — had also charged those fees at the same time as the first-named company, and it would be necessary to take steps with a view of removing this grievance. It was monstrous that when a person became the owner of a grave, or erected a monument, he should be compelled to pay the company a fee each time the grave was put in order or the monument repaired. After considerable discussion, a resolution pledging the Association to take action against the Kensal-green Cemetery Company, in case the fees were still levied, was carried unanimously.

Proposed Agricultural Exhibition in Hyde Park.—On the 13th inst. a public meeting was held at the Mansion House to promote the holding of a great agricultural exhibition in London next year, under the auspices of the Royal Agricultural Society of England. The Duke of Richmond and Gordon said that it was thought right and proper to hold the meeting of the Royal Agricultural Society in the metropolis in 1862, and it was held in Battersea Park. From the influential character of the meeting that day and the remarks that had been made, he ventured to predict that during next year an exhibition would be held in London under the auspices of the Society which would have a far greater importance than had the former show in 1862. His lordship expressed his conviction that by the exhibition next year the United Kingdom would prove that, in regard to agriculture, it was behind no other country in the world. An influential committee was appointed, and a resolution passed that it was desirable to hold the show in Hyde Park. At a meeting of the committee on Wednesday last, however, it was stated that the idea of holding the exhibition in Hyde Park would have to be abandoned.

London Association of Foremen Engineers.—Lord Granville presided at the annual dinner of this Association, at the Cannon-street Hotel, on Saturday last, and in reference to foreign competitors in industry and commerce said,—"I feel very much inclined to agree with Mr. Walter in the cheerful view he took in speaking of the danger of competition from the United States, from France, from Belgium, and from Germany. There are a great many matters to be considered in regard to this competition. There is the geographical position of different countries; there is the cheapness or dearness of labour; there is the quality and propinquity of the minerals with which they have to deal; and there is one thing which I am certain in the race which is to come,—and in which I hope and believe we shall continue to be the champions and the victors,—it is impossible to overrate, and that is the importance of intellectual instruction, whether with regard to those who employ, the foremen, or the workmen of this country."

Architectural Association.—The two most recent of the Saturday afternoon visits in connexion with this Association have been to the City Liberal Club, Walbrook (Mr. Grayson, architect), and to the St. Pancras Baths and Washhouses, Tottenham-court-road (Mr. Horace Gundry, architect). These buildings have already been illustrated and described in the *Builder*,—the Clubhouse in vol. xxxiv., p. 539; and the Baths in vol. xxxv., p. 1224.

Messrs. Chubb & Sons' Works.—The manufacturers are showing to their friends and employers the works prepared for the Paris Exhibition. Amongst them Messrs. Chubb & Son have exhibited a number of fine specimens of what they can do. Several large door-locks, for example, from 18 in. by 13 in. downwards, some of polished walnut, teak, and other woods, with steel and gilt metal ornamental work on the front in different styles, viz.: English Gothic, Florentine Gothic, Queen Anne, &c.; and some with bodies of bright polished steel and gilt metal work on that, the backs of the locks being open, showing the works. Also two reproductions of ancient German chest-locks in gilt metal, with elaborate ornamentation; ornamental keys of nearly all sizes and styles; gold keys so small that they will fit into lockets or rings; one silver-plated lock, 13 in. long, in the shape of a fish, the chub (trade mark), which, when the key is turned the mouth opens, the tongue comes out as a bolt, and the fins all move. Messrs. Chubb will also exhibit several of their fire and thief resisting safes, notably one immensely strong safe, with a painted porcelain front. In another department they will send specimens of ornamental metal work for church use, art tiles, and so on.

Typhoid Fever.—The Kensington medical officer of health, Dr. Orme Duffield, has published his report on some recent cases of typhoid fever in that parish. He is unable to attribute the outbreak to the agency of milk, and assigns it rather to the evil sanitary condition of the houses. Dr. Duffield says:—"Had the outbreak depended on milk, I cannot but think there would have been larger groups of cases occurring almost simultaneously, whereas, though there were many children in some of the houses, no such thing happened. My own impression, therefore, is that the infective agency operating in the first cases was contained in, and conveyed through, the sewers and house-drains, and that the illness in the second cases in the same houses, and in second cases in the same streets, may have been due to the infected condition of the sewers; though, as before remarked, second cases in the same houses may have derived the infection directly from the first cases. In three of the streets, where eight cases occurred, the sewers have blind or dead ends, which always involve the risk of a heavy pressure of sewer-gas on the drain inlets of the adjoining houses, as I pointed out in a special report on the drainage of the Elsham-road and its vicinity (April, 1875)."

Bequests.—We are informed that the late Mr. Bonomi has bequeathed to the Royal Academy the portrait of his father, by Rigaud, and one of Prince Hoare, by Gainsborough. Both these pictures were exhibited in the International Portrait Exhibition at South Kensington.

Land.—Mr. Beal sold on Wednesday, at the Mart, fourteen acres and a half of land for 14,500*l.* The land is part of twenty acres bought in 1850 for the sum of 600*l.*, and is situated in Battersea parish, bordering Wandsworth-common.

Christ's Hospital.—The surveyorship here is vacant. Mr. E. Blakeway I'Anson, who has had much experience in similar appointments in connexion with his father, Mr. Edward I'Anson, is a candidate. Mr. Roger Smith also offers himself.

TENDERS

For the erection of a villa residence at Wellingborough, for Mr. B. Blott. Mr. J. Christian Hukins, architect:—

Hall	£1,873 0 0
Green & Hull	1,597 10 0
Marriott (accepted)	1,489 10 0

For additions to Congregational Schools, Lewes-road, Brighton. Mr. Arthur Loader, architect:—

Barnes	£652 0 0
Parsons	621 0 0
Newnham	524 0 0
Lockyer	488 0 0
Stenning (accepted)	420 0 0

For additions to schools, 7, Ship-street, Brighton. Mr. Arthur Loader, architect:—

Botting (accepted)	£245 0 0

For union, Sittingbourne, Kent:—

Pavey	£459 0 0
Herman & King	456 15 2
Jeffreys	448 10 3
Ames	441 15 4
Beaumont	439 0 5
Seager	429 0 6
Tidy (accepted)	399 10 7

For additions to the Grove, Barnes-green, for Mr. J. Cowland. Mr. A. Jowers, architect:—

Sale (accepted)	£690	0	0

For new roads and sewers, Sevenoaks. Messrs. Walton & Vivian, surveyors. Quantities by Mr. C. W. Whitaker:—

Road No. 4.

Nobbs & Co.	£3,850	0	0
Botterill	2,769	0	0
Raynham	2,739	0	0
Owen	2,490	0	0

Road No. 5.

Nobbs & Co.	£878	0	0
Ives	856	0	0
Owen	810	0	0
Raynham	800	0	0
Botterill	753	0	0

Road No. 6.

Nobbs & Co.	£872	0	0
Ives	793	0	0
Owen	720	0	0
Botterill	690	0	0
Raynham	682	0	0

Road No. 7.

Nobbs & Co.	£1,102	0	0
Ives	1,028	0	0
Raynham	1,005	0	0
Owen	945	0	0
Botterill	912	0	0

For alterations at the Star & Garter Hotel, Kew Bridge, for Messrs. Fuller, Smith, & Turner. Mr. G. More, architect:—

Adamson	£954	0	0
Hunt	947	0	0
Nye	770	0	0
Lamble (accepted)	743	0	0

For rebuilding oil-mills at Weybridge, Surrey, for Messrs. Nias & Whittet. Mr. J. C. Kemp, architect. Quantities by Messrs. Whitmore & Kennard:—

Dickenson	£4,200	0	0
Crowder	3,648	0	0
Carter & Sons	2,997	0	0
Prout	2,897	0	0
Linfield	2,798	0	0
Bangs	2,770	0	0
Wood	2,543	0	0
Goddard & Son	2,349	0	0

For a pair of semi-detached residences on the Woodside estate, Wimbledon. Mr. J. Andrews, architect:—

Jones & Co.	£1,990	0	0
Robinson	1,860	0	0
Niblett	1,815	0	0
Warr	1,795	0	0
Parker & Evans	1,760	0	0
Laing & Co.	1,750	0	0
Linfield	1,748	0	0
Hobern	1,650	0	0
Wilcox	1,643	0	0
Cooke & Co.	1,625	0	0
Julian & Co.	1,596	0	0
Garrud	1,583	0	0
Kellaway	1,470	0	0
Bantock	1,464	10	0

For proposed house, &c., Muswell-hill, for Mr. Barlow. Mr. A. T. Barlow, architect. Quantities supplied:—

Adamson	£5,865	0	0
Bentley	5,766	0	0
Scrivener & White	5,734	0	0
Lathey, Brothers	5,487	0	0
Perry & Co.	5,400	0	0
Tyerman	5,115	0	0
Langmead & Way	5,047	0	0

For houses and shop on the flat system, White-street, Borough, for Mr. W. P. Griffith. Mr. Banister Fletcher, architect:—

Hobern	£2,072	11	0
Fairhead	1,759	0	0
Tyerman	1,725	0	0
Bayes, Brothers, & Allen	1,692	0	0
W. & H. Castle (accepted)	1,675	0	0

For additions, with coach-house and stable to house, Richmond-road, Barnet, for Mr. John Pratt. Messrs. Clark & Holland, architects. Quantities not supplied:—

Wall, Brothers	£2,050	0	0
Toms	2,047	0	0

For alterations at the Plough Tavern, Lordship-lane, Dulwich, S.E., for Mr. Charles Gould. Mr. W. McNab-Soul, architect:—

Matthews	£227	0	0
Shearing & Sons	225	0	0
Watson & Dennet (accepted)	223	0	0
For New Counter.			
Warne	£106	0	0

For the erection of a villa residence at Castle-hill, Maidenhead, Berks. Messrs. C. Cooper & Davy, architects. Quantities supplied:—

Cox	£1,165	0	0
Partlo, Brothers	1,123	0	0
Woodbridge	1,111	0	0
Kempsell, jun. (accepted)	1,095	0	0

For new wing and alterations to the Castle Hotel, at Hastings, for Mr. George Gaze. Messrs. Cross & Wells, architects:—

Harman	£4,770	0	0
Avard	4,715	0	0
Wood	4,490	0	0
Geary	4,479	0	0
Hughes	4,470	0	0
Cruttenden	4,395	0	0
Vidler	4,243	0	0
Rodda	4,185	0	0

For the erection of a manufactory at Millwall, for Mr. J. T. Morton. Mr. William Eve, architect:—

High	£1,467	0	0
Heiser	1,327	0	0
Sheffield & Prebble	1,089	0	0
Salt	1,089	0	0
Crabb (accepted)	1,030	0	0

For rebuilding No. 7, Fenchurch-buildings, Fenchurch-street, for Mr. T. N. Debenham. Mr. Robert J. Worley, architect:—

Revised Estimate.

Toms (accepted)	£1,776	0	0

For the erection of stabling, Brentford, for Messrs. Carter, Paterson, & Co. Mr. William Eve, architect:—

Sweet	£189	0	0
Brunsden	153	0	0
Mills	152	0	0
Nye (accepted)	137	0	0

For three cottages, &c., exclusive of haulage, and part of the materials, for Sir Stafford H. Northcote, Bart. Mr. Jerman, architect:—

Bennett & Stephens	£413	0	0
Gibbard	366	0	0
Berry	356	0	0
Blake	355	0	0
Dennis, Short, and Milford	295	0	0

For new Wesleyan chapel and schools, Cottingham, near Hull, York. Mr. William Ranger, architect:—

Dickinson	£3,812	0	0
Wilson, Brothers	3,772	0	0
Habbershaw	3,786	0	0
Bray	3,697	0	0
Allen & Son	3,671	0	0
Blackburn (accepted)	3,420	0	0
Stevens*	3,366	0	0
Higham*	3,312	0	0

* Withdrawn for error.

For new Wesleyan chapel, Goudhurst, Kent. Mr. W. Ranger, architect:—

Lovell	£445	0	0
Tanner (accepted)	389	10	0

All bricks are provided by the trustees.

For the erection of new premises in the Poultry. Mr. A. Bresson, architect:—

Wagner (accepted)	£3,600	0	0

For rebuilding Nos. 13, 14, and 15, Mortimer-street, Regent-street, for Mr. R. Cripps. Mr. Augustus E. Hughes, architect:—

Burmingham	£3,585	0	0
Wagner (accepted)	3,550	0	0

For the erection of nine houses at Woolwich, for Mr. R. Hunter. Mr. Dovey, architect:—

Wagner (accepted)	£3,233	0	0

For the erection of three shops in Bell-lane, Spitalfields. Mr. H. H. Collins, architect. Quantities supplied by Messrs. Batstone, Brothers:—

Jay	£2,783	0	0
Bridgman	2,590	0	0
Abraham	2,530	0	0
Williams & Sons	2,530	0	0
Hall & Cooper	2,490	0	0
Sheffield & Prebble	2,444	0	0
Webber	2,390	0	0

For the erection of three detached villas at Thornton-heath, on the first portion of the Brigstock Estate. Mr. Daniel R. Dale, architect:—

Dale (accepted).

For alterations and additions to premises in Oxford street. Mr. Daniel R. Dale, architect:—

Morter (accepted).

For alterations and additions to No. 274, Oxford-street, for Mr. T. Linscott. Mr. Daniel R. Dale, architect:—

Hoare & Son	£750	0	0

For the erection of a pair of cottages in the Southbridge-road, Croydon. Mr. Daniel R. Dale, architect:—

Peascud	£550	0	0

For alterations and additions to the mansion, Stone Hall, Oxted, Surrey, and erection of a two-cone hop-oast at Greenhurst, Oxted, for Mr. G. Barker. Quantities provided. Mr. Daniel R. Dale, architect:—

Wallis	£3,298	0	0
Fetherstone	3,110	0	0
Hoare	2,853	0	0
Ward	2,769	0	0
Crabtree	2,595	0	0
Charlwood, Brothers (accepted)	2,526	14	0

For alterations at No. 99, Westminster Bridge-road, for Messrs. Christmas & Co.:—

Bambery & Stephens (accepted).

For pulling down and rebuilding the house and workshops, No. 86, Brick-lane, Bethnal-green, for Mr. C. C. Richards, M.D. Mr. William Reddall, architect:—

Kiddle & Son	£1,678	0	0
Eaton	1,565	0	0
Pritchard	1,529	0	0
Browne & Robinson	1,485	0	0
Cook	1,450	0	0
Higgs	1,197	0	0

For the erection of a villa residence at Haverstock-hill. Mr. E. Groom, architect:—

Nash (accepted)	£1,859	0	0

For the erection of a chapel at Broadesbury, Edgware-road, in the county of Middlesex. Mr. Thomas Arnold, architect. Quantities supplied by Messrs. R. L. Curtis & Sons:—

	Shortened.			Extended.		
Colls & Sons	£7,210	0	0	£1,125	0	0
Ashby, Brothers	7,154	0	0	1,110	0	0
Nightingale	7,089	0	0	1,089	0	0
Browne & Robinson	6,996	0	0	1,033	0	0
Harris and Wardrop	6,997	0	0	896	0	0
Morter	6,946	0	0	863	0	0
Dove, Brothers	6,900	0	0	835	0	0
Scrivener & White	6,643	0	0	836	0	0
Hill, Higgs, & Hill	6,480	0	0	780	0	0
Allen	6,290	0	0	—		

For the erection of a villa residence in the Grove, Stratford, Essex, for Mr. J. Self. Mr. J. T. Newman, architect. Quantities supplied by Messrs. R. L. Curtis & Sons:—

Read (accepted)	£1,375	0	0

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